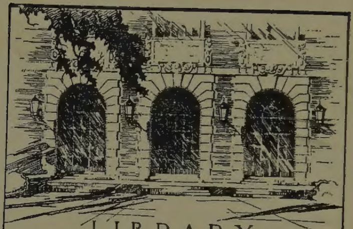

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THE COST OF LIVING IN THE UNITED STATES

STUDIES OF THE COST OF LIVING

PUBLISHED BY THE

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THE COST OF LIVING IN THE UNITED STATES

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FOREWORD

INTEREST in measurement of the cost of living and its changes from time to time and place to place is a striking feature of the economic history of the past ten years. After the intensive cultivation of this interest in the United States and other countries during a decade of great changes in economic and social conditions, it is desirable to survey and sum up the results of this comparatively new development and to estimate its significance as a guide in industrial and social adjustments. This requires, however, a clear and accurate understanding of the nature and method of cost of living measurements. Cost of living statistics have come to be accepted as a matter of course, but lack of general comprehension of their basis has often resulted in misinterpretation, confusion and antagonism.

Aside from ten studies of the actual cost of living in separate localities, the National Industrial Conference Board has published sixteen reports on changes in the cost of living since 1914, based on continuing investigations. In order to clarify the problem of measuring the actual cost of living, the Conference Board in 1921 issued its study of "Family Budgets of American Wage Earners," which presented an exhaustive analysis of all available material relating to estimates of actual living costs, family budgets, the standard of living and allied questions.

The purpose of the present volume is to afford a similar analysis and comparison of the more important index numbers of the cost of living in the United States, in order that the character and basis of these measures of variations from time to time and from place to place may be better understood and their intelligent use facilitated. In addition, this volume presents a survey of changes in the cost of living for the United States as a whole during the past decade, summing up in this way the outstanding results of the Conference Board's studies in this field to date.

Taken in conjunction with the Board's study of "Family Budgets of American Wage Earners," the present volume affords a comprehensive analysis of existing cost of living data in this country and should prove a valuable guide in understanding and evaluating the significance of this important part of modern economic knowledge.

This volume is the result of an investigation conducted by Miss M. L. Stecker and assistants, of the Conference Board's Research Staff, under the supervision of the Board's Staff Economic Council.

In the preparation of its studies the National Industrial Conference Board avails itself of the experience and judgment of the business executives who compose its membership and of recognized authorities in special fields, in addition to the scientific knowledge and equipment of its Research Staff. The publications of the Board thus finally represent the result of scientific investigation and broad business experience, and the conclusions expressed therein are those of the Conference Board as a body.

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Taken in conjunction with the Board's study of "Family Budgets of American Wage Earners," the present volume affords a comprehensive analysis of existing cost of living data in this country and should prove a valuable guide in understanding and evaluating the significance of this important part of modern economic knowledge.

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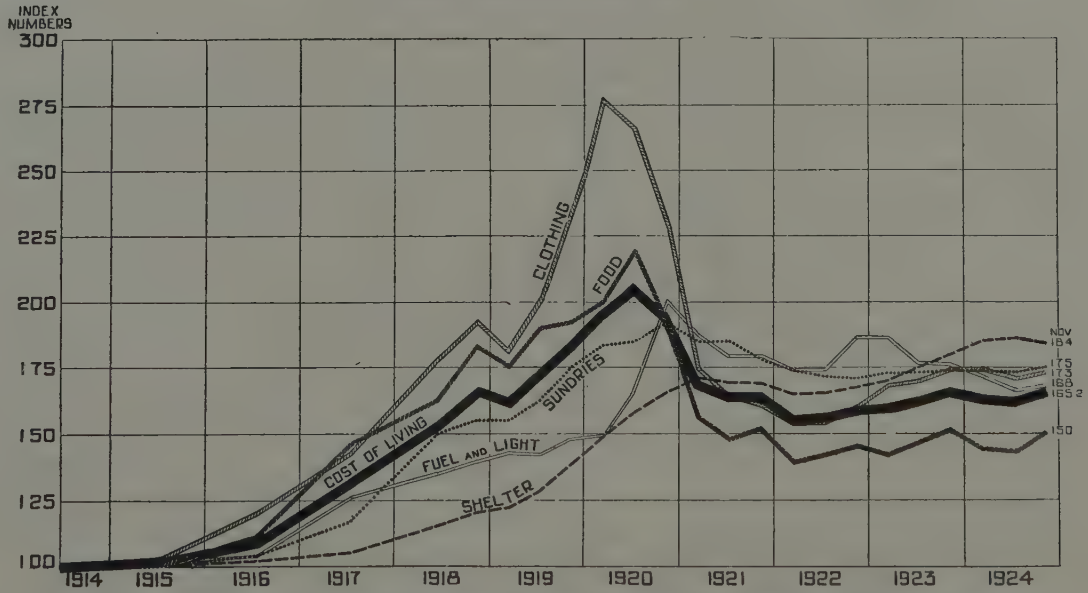
CHART 1: INDEX NUMBERS OF THE COST OF LIVING IN THE UNITED STATES, JULY, 1914 TO NOVEMBER, 1924

Average Prices in July, 1914 = 100

(National Industrial Conference Board)



The cost-of-living curve represents the weighted average of changes in the cost of the five major items in the family budget. Increases prior to 1918 are approximated from incomplete data for all items except food; increases in food prices are the increases above average prices in 1913, from the United States Bureau of Labor Statistics.

THE COST OF LIVING IN THE UNITED STATES

INTRODUCTION

INTEREST in the cost of living and in changes in the cost of living has assumed an importance in the last decade which brings a consideration of the problems connected therewith to the forefront of current social questions. Prior to the World War prices had been advancing to such an extent that in several countries official investigations had been made to measure the movement, to ascertain its causes and to suggest means by which the rise in prices might be checked; people everywhere were talking about the "high cost of living." Conditions during and immediately after the World War so greatly accelerated the upward trend as to intensify this interest.

Such measurements of changes in the cost of living as there were before the war related almost entirely to changes in "price levels" and in the purchasing value of the dollar and were based largely on wholesale prices and not on what went out of the consumer's pocket.[1] A few investigators had attempted to formulate standards for measuring expenditures and to ascertain the minimum requirements for so-called decent living. In this and other countries scattered studies of the actual cost of living under prevailing conditions had been made in connection with investigations of the tariff problem, poor relief, and wages, and where wages were set by governmental authority, as in the Australian states, New Zealand, England, and a few American states, minimum rates were related in various ways to estimates of necessary expenditures.

For the most part, however, interest in family budgets and price indexes was theoretical, and even such data as were available were put to little practical use.[2] So far as is known, nowhere in the world was there, prior to 1914, a price index based on a balanced family budget and with retail prices weighted according to consumption.

---

[1] Except that there were a few retail food price indexes and in the United States retail indexes for coal and gas.

[2] Chapin, for example, in his account of the place of workingmen's budgets in statistical literature, wrote in 1909: "The object of collecting, comparing, and combining workingmen's budgets is to get a reliable representation of the standard of living, first, absolutely, for a given time, place and class of laborers; second, relatively, in comparison with the standard of different times, places, and classes of men." R. C. Chapin, "The Standard of Living among Workingmen's Families in New York City," New York, 1909, p. 3.

Of course, if all prices, everywhere, changed at the same time and the same rate, these changes would create no problem, and interest in the cost of living would not arise. But wages advance at one time, salaries at another, farmers' earnings at another, and each in a different degree. The cost of food may go up sooner or later and more or less than the cost of clothing; rents may lag behind and then take a spurt when the prices of other commodities are falling. Incomes do not move exactly in accord with the movement of retail prices; retail prices do not move with wholesale prices; the living costs of different social and economic groups do not change synchronously, nor do their relative incomes, so that their comparative status often changes widely from one period to another.

The conditions produced by the war and in subsequent years emphasized this characteristic of our economic system. Commodity prices, both wholesale and retail, which had been rising a few points a year in previous decades, moved up a few points a month or even a week during the war. Incomes which would buy a satisfactory living in 1914 had become manifestly inadequate by 1917. These changes were measured in various ways for the purpose of adjusting wages. Wholesale price changes or retail food price changes were sometimes taken alone, sometimes together, and sometimes one or both were combined with estimates of changes in rents and other items in special localities. The results were often attended by disagreement between employers and employees when wage adjustments were being made on the basis of cost of living data. Moreover, it became increasingly recognized that, no matter how satisfactory a measure of market conditions wholesale price changes might be, they did not measure changes in the cost of living for the ultimate consumer;[1] and that, since food required only about two-fifths of the average family's annual outlay, changes in retail

---

[1] A comparison of the trend of wholesale prices and of retail prices is given in Table 1 and is illustrated in Chart 2. This shows clearly that wholesale prices often rise sooner and to a higher level than retail prices and that the reverse movement is also more rapid and more abrupt.

Table 1: Relative Increase in Wholesale Prices, Retail Prices, and the Cost of Living, 1913 to December, 1924, Inclusive

(Average Prices in 1913 = 100)

(United States Bureau of Labor Statistics)

Month and Year	Weighted Total		Food		Clothing		Fuel and Lighting		Building Materials and Rents		House-furnishing Goods	
	All Commodities, Wholesale	Cost of Living, Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail
1913												
January	100	..	99	..	99	..	100	..	101	..	100	..
February	100	..	98	..	100	..	101	..	102	..	100	..
March	100	..	98	..	100	..	101	..	103	..	100	..
April	100	..	98	..	100	..	98	..	103	..	100	..
May	99	..	97	..	100	..	98	..	103	..	100	..
June	99	..	99	..	100	..	98	..	102	..	100	..
July	100	..	101	..	100	..	99	..	99	..	100	..
August	100	..	102	..	100	..	101	..	99	..	100	..
September	102	..	103	..	101	..	101	..	99	..	100	..
October	101	..	102	..	101	..	102	..	98	..	101	..
November	100	..	103	..	101	..	102	..	97	..	100	..
December	99	..	101	..	100	..	99	..	96	..	100	..
1914												
January	98	..	101	..	99	..	99	..	93	..	100	..
February	99	..	100	..	99	..	99	..	94	..	100	..
March	98	..	98	..	99	..	100	..	94	..	100	..
April	98	..	95	..	99	..	98	..	93	..	100	..
May	97	..	96	..	99	..	95	..	93	..	100	..
June	97	..	97	..	99	..	91	..	93	..	100	..
July	97	..	99	..	99	..	91	..	92	..	100	..
August	101	..	109	..	99	..	89	..	93	..	100	..
September	102	..	111	..	97	..	89	..	92	..	100	..
October	97	..	106	..	96	..	88	..	90	..	100	..
November	97	..	106	..	94	..	88	..	88	..	100	..
December	97	103.0	105	105.0	94	101.0	88	101.0	88	100.0	100	104.0

TABLE 1: RELATIVE INCREASE IN WHOLESALE PRICES, RETAIL PRICES, AND THE COST OF LIVING, 1913 TO DECEMBER, 1924, INCLUSIVE—*Continued*

(Average Prices in 1913 = 100)

(United States Bureau of Labor Statistics)

Month and Year	Weighted Total		Food		Clothing		Fuel and Lighting		Building Materials and Rents		House-furnishing Goods	
	All Commodities, Wholesale	Cost of Living, Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail
1915												
January	98	..	106	..	94	..	87	..	88	..	99	..
February	99	..	108	..	95	..	86	..	89	..	99	..
March	99	..	106	..	95	..	84	..	90	..	99	..
April	99	..	105	..	96	..	82	..	90	..	99	..
May	100	..	105	..	96	..	82	..	93	..	100	..
June	99	..	102	..	96	..	81	..	93	..	100	..
July	100	..	104	..	96	..	81	..	94	..	100	..
August	100	..	102	..	97	..	85	..	93	..	100	..
September	100	..	99	..	99	..	91	..	94	..	100	..
October	102	..	102	..	101	..	94	..	98	..	100	..
November	104	..	106	..	105	..	98	..	101	..	100	..
December	108	105.1	108	105.0	107	104.7	103	101.0	104	101.5	101	110.6
1916												
January	113	..	109	..	110	..	113	..	110	..	103	..
February	115	..	110	..	114	..	115	..	113	..	103	..
March	119	..	112	..	117	..	119	..	118	..	104	..
April	121	..	114	..	118	..	120	..	120	..	104	..
May	122	..	115	..	120	..	120	..	121	..	105	..
June	123	..	115	..	122	..	122	..	120	..	105	..
July	123	..	117	..	125	..	121	..	120	..	107	..
August	126	..	122	..	128	..	116	..	120	..	107	..
September	130	..	126	..	130	..	120	..	121	..	107	..
October	136	..	134	..	137	..	128	..	124	..	109	..
November	146	..	141	..	147	..	155	..	126	..	111	..
December	149	118.3	137	126.0	154	120.0	163	108.4	132	102.3	111	127.8

1917												
January	153	..	140	..	158	..	171	..	138	..	118	..
February	157	..	145	..	157	..	178	..	140	..	119	..
March	162	..	148	..	158	..	174	..	144	..	120	..
April	173	..	164	..	164	..	164	..	155	..	121	..
May	183	..	175	..	167	..	178	..	159	..	121	..
June	185	..	171	..	174	..	183	..	169	..	123	..
July	188	..	169	..	181	..	176	..	168	..	129	..
August	189	..	175	..	186	..	167	..	167	..	129	..
September	187	..	176	..	185	..	160	..	167	..	130	..
October	183	..	180	..	185	..	153		156	..	130	..
November	183	..	181	..	191	..	161	..	156	..	131	..
December	182	142.4	181	157.0	195	149.1	163	124.1	158	100.1	133	150.6
1918												
January	184	..	182	..	201	..	164	..	161	..	137	..
February	186	..	183	..	205	..	164	..	161	..	138	..
March	187	..	179	..	211	..	165	..	164	..	140	..
April	190	..	181	..	220	..	166	..	169	..	144	..
May	190	..	180	..	226	..	169	..	170	..	146	..
June	191	..	180	..	233	..	169	..	172	..	152	..
July	196	..	185	..	238	..	175	..	177	..	159	..
August	200	..	189	..	239	..	175	..	179	..	161	..
September	204	..	195	..	245	..	176	..	179	..	163	..
October	202	..	198	..	245	..	176	..	177	..	164	..
November	203	..	204	..	241	..	179	..	177	..	164	..
December	202	174.4	206	187.0	233	205.3	179	147.9	177	109.2	163	213.2
1919												
January	199	..	203	..	220	..	178	..	176	..	167	..
February	193	..	194	..	210	..	178	..	173	..	165	..
March	196	..	199	..	203	..	178	..	171	..	164	..
April	199	..	205	..	205	..	177	..	169	..	167	..
May	202	..	210	..	216	..	178	..	173	..	168	..
June	203	177.3	204	184.0	243	214.5	180	145.6	189	114.2	180	225.1
July	212	..	210	..	262	..	181	..	209	..	183	..
August	216	..	214	..	276	..	184	..	226	..	188	..
September	210	..	205	..	283	..	188	..	229	..	190	..
October	211	..	205	..	291	..	189	..	229	..	194	..
November	217	..	210	..	304	..	188	..	232	..	217	..
December	223	199.3	220	197.0	317	268.7	189	156.8	248	125.3	222	263.5

TABLE 1: RELATIVE INCREASE IN WHOLESALE PRICES, RETAIL PRICES AND THE COST OF LIVING, 1913 TO DECEMBER, 1924, INCLUSIVE—*Continued*

(Average Prices in 1913 = 100)

(United States Bureau of Labor Statistics)

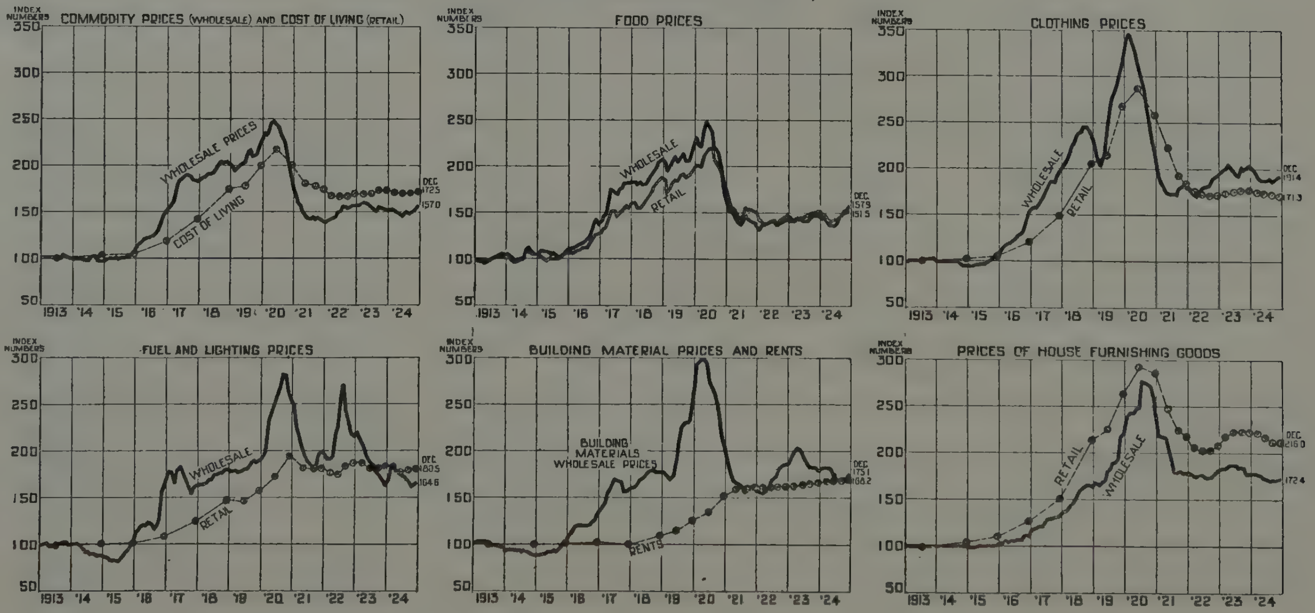
Month and Year	Weighted Total		Food		Clothing		Fuel and Lighting		Building Materials and Rents		House-furnishing Goods	
	All Commodities, Wholesale	Cost of Living, Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail
1920												
January	233	. .	231	. .	339	. .	194	. .	274	. .	239	. .
February	232	. .	222	. .	346	. .	199	. .	293	. .	242	. .
March	234	. .	220	. .	344	. .	208	. .	297	. .	242	. .
April	245	. .	238	. .	336	. .	231	. .	300	. .	242	. .
May	247	. .	248	. .	328	. .	239	. .	293	. .	247	. .
June	243	216.5	243	219.0	314	287.5	250	171.9	275	134.9	248	292.7
July	241	. .	238	. .	300	. .	259	. .	269	. .	275	. .
August	231	. .	221	. .	286	. .	269	. .	265	. .	274	. .
September	226	. .	215	. .	266	. .	281	. .	255	. .	272	. .
October	211	. .	201	. .	245	. .	280	. .	240	. .	271	. .
November	196	. .	190	. .	226	. .	264	. .	215	. .	260	. .
December	179	200.4	170	178.0	215	258.5	254	194.9	204	151.1	242	285.4
1921												
January	170	. .	162	. .	196	. .	247	. .	192	. .	217	. .
February	160	. .	151	. .	188	. .	225	. .	180	. .	217	. .
March	155	. .	151	. .	183	. .	212	. .	173	. .	216	. .
April	148	. .	144	. .	176	. .	205	. .	167	. .	216	. .
May	145	180.4	139	144.7	173	222.6	200	181.6	165	159.0	209	247.7
June	142	. .	137	. .	172	. .	191	. .	163	. .	196	. .
July	141	. .	141	. .	172	. .	186	. .	160	. .	180	. .
August	142	. .	146	. .	171	. .	184	. .	156	. .	179	. .
September	141	177.3	142	153.1	178	192.1	181	180.7	156	160.0	179	224.7
October	142	. .	140	. .	180	. .	189	. .	159	. .	180	. .
November	141	. .	139	. .	180	. .	197	. .	163	. .	178	. .
December	140	174.3	136	149.9	180	184.4	199	181.1	158	161.4	178	218.0

1922												
January	138	..	131	..	176	..	195	..	157	..	178	..
February	141	..	135	..	174	..	191	..	156	..	177	..
March	412	166.9	137	138.7	172	175.5	191	175.8	155	160.9	175	206.2
April	143	..	137	..	171	..	194	..	156	..	175	..
May	148	..	138	..	175	..	216	..	160	..	176	..
June	150	166.9	140	141.0	179	172.3	225	174.2	167	160.9	176	202.9
July	155	..	142	..	180	..	254	..	170	..	173	..
August	155	..	138	..	181	..	271	..	172	..	173	..
September	153	166.3	138	139.8	183	171.3	244	183.6	180	161.1	173	202.9
October	154	..	140	..	188	..	226	..	183	..	176	..
November	156	..	143	..	192	..	218	..	185	..	179	..
December	156	169.5	144	146.6	194	171.5	216	186.4	185	161.9	182	208.2
1923												
January	156	..	141	..	196	..	218	..	188	..	184	..
February	157	..	141	..	199	..	212	..	192	..	184	..
March	159	168.8	143	142.0	201	174.4	206	186.2	198	162.4	185	217.4
April	159	..	144	..	205	..	200	..	204	..	187	..
May	156	..	144	..	201	..	190	..	202	..	187	..
June	153.5	169.7	142.0	144.3	197.7	174.9	186.1	180.6	194.2	163.4	186.9	222.2
July	150.6	..	141.3	..	193.1	..	183.0	..	189.7	..	186.7	..
August	150.1	..	141.6	..	192.6	..	178.2	..	185.9	..	182.7	..
September	154	172.1	147	149.3	202	176.5	176	181.3	182	164.4	183	222.4
October	153	..	148	..	199	..	172	..	182	..	183	..
November	152	..	148	..	201	..	167	..	181	..	176	..
December	151	173.2	147	150.3	203	176.3	162	184.0	178	166.5	176	222.4
1924												
January	151	..	143	..	200	..	169	..	181	..	176	..
February	152	..	143	..	196	..	180	..	182	..	176	..
March	150	170.4	141	143.7	191	175.8	181	182.2	182	167.0	175	221.3
April	148	..	137	..	189	..	179	..	182	..	175	..
May	146.9	..	136.6	..	186.8	..	177.3	..	180.3	..	172.5	..
June	144.6	169.1	135.6	142.4	187.2	174.2	174.7	177.3	172.7	168.0	171.8	216.0
July	147.0	..	138.7	..	187.5	..	173.2	..	168.8	..	170.8	..
August	149.7	..	144.0	..	189.9	..	169.7	..	169.2	..	171.0	..
September	148.8	170.6	147.7	146.8	186.5	172.3	168.0	179.1	170.7	168.0	171.1	214.9
October	151.9	..	151.6	..	188.4	..	162.1	..	170.7	..	171.0	..
November	152.7	..	153.8	..	190.4	..	162.8	..	171.6	..	172.0	..
December	157.0	172.5	157.9	151.5	191.4	171.3	164.6	180.5	175.1	168.2	172.4	216.0

CHART 2: INDEX NUMBERS OF WHOLESALE PRICES, RETAIL PRICES, AND THE COST OF LIVING, 1913 TO DECEMBER, 1924, INCLUSIVE

(Average Prices in 1913 = 100)

(United States Bureau of Labor Statistics)



food prices alone did not adequately measure changes in the total cost of living.[1] What was needed was an estimate of the change in the total cost of living, related to local conditions and to a definite standard of living.

It had generally been assumed up to this time that the creation of an index of the total cost of living, based on changes in retail prices of the major component items, weighted and combined according to consumption, was a task fraught with almost insuperable difficulties because of the operations involved. The establishment of a basic budget which would properly represent complete requirements and the maintenance of comparable standards from period to period[2] required a choice of typical articles and a knowledge of their use by average families which could be obtained only through considerable effort in careful investigation. The selection of retailers who would furnish quotations, and the enlistment of their co-operation in numbers[3] sufficient to afford a broad enough basis for generalizing, implied familiarity with a wide variety of marketing conditions. The collection of the data and the clerical work involved in reaching a single figure were all necessarily extremely costly.[4]

In 1917, in order to settle the constant disputes in the shipbuilding industry, the Shipbuilding Wage Adjustment Board of the Emergency Fleet Corporation entered into an agreement with the unions involved to readjust wages at intervals of not less than six months, if the majority of the craft or crafts at a plant requested it, on the basis that there had been a "general and material increase in the cost of living."[1] To determine if there had been such an increase and to ascertain its amount, the United States Bureau of Labor Statistics undertook late in 1917[2] investigations in the principal shipbuilding centers. Expenditures of families in 35 communities in 1917 or in 1918 were taken, and through prices collected from local merchants the increases in cost between 1914, 1915, 1916, 1917, and 1918 were computed. No attempt was made to establish desirable standards of living, but only to measure changes in the cost of maintaining the existing standard on the basis of changing rents and retail prices. These estimates for separate localities were not combined into an index for the country as a whole, but prices in 18 of them later served as the basis, through December, 1917, for the Bureau's present index of the cost of living in the United States.[3]

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[1] Comparisons of the figures showing changes in food prices and in the total cost of living all indicate that food prices rose much more rapidly and to a higher point and fell much more rapidly and to a lower point than did the total cost of living. See, for example, Tables 3, 6, 7, 8.

[2] A cost of living index series has frequently been started through collecting retail food prices, since these articles are for the most part easily standardized and comparability of standard is readily maintained. Coal, matches and kerosene may be added; and then house rents. When clothing and sundries are reached, however, difficulties arise. This is because of the well-nigh limitless choice of samples and the fact that choice necessarily rests on individual preference or judgment; and because of complications due to changes in styles and changes of season and the problems of standardization. The Canadian number has grown in that way. The index number computed by the federal statistical office in Germany does not yet include sundries.

[3] An index of retail prices is necessarily based on an average of several quotations, whereas for an index based on wholesale prices only representative market quotations are necessary.

[4] The Massachusetts Commission on the Necessaries of Life reports that in constructing its index of the cost of living over 400,000 mathematical computations were made. Massachusetts, Commission on the Necessaries of Life, Report, Boston, 1920, p. 112.

In the meanwhile, in June, 1918, the first estimate of changes in the cost of living made for the country as a whole, based on a complete budget with retail prices weighted according to consumption, was constructed by the National Industrial Conference Board. This was designed to meet the growing demand of industry in general and of the employer members of the then functioning National War Labor Board in particular for a more exact measure of cost of living changes than was afforded by index numbers of wholesale commodity prices or retail food prices. The report embodying the result of the Board's researches[4] brought together all existing material in the United States that would make possible a fairly exact measurement of the percentage by which the cost of living among workingmen's families had increased between July, 1914 and June, 1918, if they continued to maintain the same standard of living. These data were fragmentary and scattered, but when supplemented by the results of questionnaires relating to the cost of clothing, of fuel, and of house rents, they gave a very good general estimate of how much more it cost to live in 1918 than in 1914, at the same standard of living. In November, 1918, data were collected more systematically and the National Industrial Conference Board began to build up its files of retail merchants, real estate brokers and others closely in touch with current prices of the goods and services in daily use by families of small and moderate means. The co-operation of these correspondents in furnishing prices has made possible the continuation of the series. In March, 1919, estimates were interpolated for the years 1915, 1916 and 1917 for which extensive data do not exist, and from then on the series has been complete. Two reports were issued in 1918 and three in 1919. Beginning in January, 1920, prices were collected every month on a somewhat more limited basis.[1] Reports were published three times a year, through July, 1923.[2] Since then monthly statements have been and are now being made public.

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[1] *Monthly Review*, U. S. Bureau of Labor Statistics, Washington, March, 1918, pp. 74–75.

[2] The report on Philadelphia was published in the March, 1918, *Monthly Review* of the U. S. Bureau of Labor Statistics; the report on New York, in April, 1918. Reports on subsequent places appeared in the June number of the *Monthly Review* and in the August, September and October numbers of the *Monthly Labor Review*.

[3] See pp. 65–67 of this volume.

[4] National Industrial Conference Board, Research Report No. 9, "Wartime Changes in the Cost of Living," Boston, August, 1918.

The year after the National Industrial Conference Board began its series of index numbers of the cost of living, the General Court of Massachusetts created a special Commission on the Necessaries of Life to deal with problems connected with rising prices. This commission is a research as well as an administrative body, in that, among other activities, it undertakes to measure changes in the cost of living each month. Its report published in February, 1920 contained a series of index numbers showing the relation of prices by months since 1910[3] to average prices in the year 1913, which was adopted as the normal or base period. Five annual reports have been published,[1] and special memoranda are issued each month, so that a complete index series by months is available.

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[1] See pp. 61, 62, of this volume.

[2] National Industrial Conference Board Research Reports Nos. 9, 14, 17, 19, 25, 28, 30, 33, 36, 39, 44, 49, 54, 57, 60, 63.

[3] An earlier report on the cost of living in Massachusetts was issued in 1910. Massachusetts, Commission on the Cost of Living, Report, Boston, May, 1910. The later figures make possible estimates of changes in the cost of living in Massachusetts since 1901. See, for example, National Industrial Conference Board, Research Report No. 41, "Family Budgets of American Wage Earners," New York, 1921, pp. 65–66.

In 1918 and 1919, in order to satisfy the requirements of the National War Labor Board for further information on the cost of living, the United States Bureau of Labor Statistics made another investigation of the cost of living in the United States. This included many of the localities in which the cost of living of shipyard workers had previously been studied, but was in some ways far more representative than the earlier studies. Retail prices were collected in 31 of these localities for June and December, 1919, and for June, 1920;[2] and in 32 localities for December, 1920, May, September and December, 1921, and for March, June, September and December of succeeding years. From these, index numbers of the cost of living have been computed for each locality separately, and they have also formed the basis for the computation of an index of the cost of living for the country as a whole, with average prices in 1913 as a base. These numbers are now computed four times a year and are published quarterly in the *Monthly Labor Review.*

In addition to these two indexes for the country as a whole and one for the important industrial state of Massachusetts, a number of local indexes of the cost of living have been computed. Of these, the only official one is that compiled by the Industrial Commission of Colorado for the city of Denver. In Rochester, N. Y., New Bedford, Mass., and probably in other cities, the local chamber of commerce collects prices and prepares an index each month. In Detroit, the Visiting Housekeeper Association, a philanthropic organization, each month calculates the cost of maintaining certain types of families. In some localities an important industrial concern has prepared an index number. All of these local numbers are based on changes in retail prices of the goods and services entering into an average family budget, weighted according to consumption.

The main reason for the origin and continuation of all of these index numbers of the cost of living has been an agreement, or at least an existing practice, that wage adjustments should be made with price changes. This procedure was for the most part generally accepted during the period of rising prices up to 1920, although on various occasions in preceding years[1] attempts had been made, sometimes successfully, to establish wages on the basis of estimates of the actual cost of living based on a family budget. In wage arbitrations since 1920 the budget system of wage determination has come in for greater consideration and for a time the country was flooded with estimates of the minimum cost of living. Almost all of these related to the requirements of wage earners' families of various degrees of economic prosperity; budgets for families with incomes permitting more than a so-called minimum standard were rarely attempted.[2] An interesting recent development of the general interest in cost of living and family budgets has been the growing use of such data in connection with thrift plans, banking and instalment purchasing. This use involves practical methods of keeping accounts and budgeting expenditures so as to apportion the income in a rational manner; no attempt is made to estimate what the income should be.

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[1] Massachusetts, Special Commission on the Necessaries of Life, Report, Boston, 1920; *ibid.*, 1921; *ibid.*, 1922; *ibid.*, 1923; *ibid.*, 1924.

[2] Washington, D. C., was added in December, 1920.

The definition and measurement of living costs depend entirely on the point of view from which the problem is approached and on the questions which the evidence collected is designed to answer. If merely a rough generalization or trend is desired, the data may naturally be much less refined and complete than where, for example, wages are to be fixed in exact accord with the changes in living costs.[3]

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[1] See National Industrial Conference Board, Research Report No. 41, *op. cit.*, Chapter VII.

[2] In addition to the budgets for clerical and professional workers referred to in the National Industrial Conference Board Research Report, No. 41, *op. cit.*, p. 3, the only significant recent budgets designed to cover the needs of a family in the higher income groups are those prepared in 1921 by the California Civil Service Commission, for a clerk's family and for the family of an executive. California State Civil Service Commission, Cost of Living Survey, Report, Sacramento, 1923.

[3] A number of industrial establishments both in this country and abroad have agreements with their workmen whereby a movement of a minimum number of points up or down in the cost of living scale will result in a compensatory adjustment of wages. When prices began to fall, an interesting situation arose in some plants where, prior to the development of a cost of living index, wages were adjusted with wholesale prices. The price decline in 1920 was so obviously not reflected in retail prices that the agreements to reduce wages accordingly could not be carried

Moreover, it must be borne in mind that there is a difference, also, between expenditures and costs. Expenditures are what is paid out, and involve other considerations than the price level; costs are a measurement of the price level. To measure changes in expenditures is to measure to some extent changes in the standard of living; to measure changes in prices assumes the maintenance of the same standard of living.[1]

The present volume has been written for the purpose of bringing together and interpreting existing information on the cost of living, and particularly on changes in the cost of living in the United States.[2] This relates entirely to the requirements of workingmen's families. Although a large body of data exists regarding index numbers and family budgets in other countries, these are not treated here; nor is there included in this treatise any discussion of the uses to which American data have been put. After an analysis of the problems involved in determining the actual cost of living and the relative cost from time to time or from place to place, the discussion proceeds to a description of the principal index numbers by means of which changes in the cost of living have been measured. These are then compared and their differences noted. Finally, there is an estimate of changes in the cost of living between July, 1914, and November, 1924, for the United States as a whole, as measured by the index numbers of the National Industrial Conference Board.

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out and other adjustments had to be made. The same thing would have happened if food prices only had been used, for, since November, 1920, the retail food price increase since 1914 has been far below the increase in the total cost of living. Estimates of "real wages" made on this basis have, of course, since that time shown an increase far beyond the true occurrence, just as when food costs had gone up higher than the cost of living, "real wages" appeared to be greatly depressed. For these reasons estimates of the economic status of wage earners based on "real wages" derived from price data other than a total cost of living are subject to considerable qualification. See, for example, Paul H. Douglas and Frances Lamberson, "The Movement of Real Wages, 1890–1918," *American Economic Review*, September, 1921, pp. 409 ff.; Paul H. Douglas, "The Movement of Wages and the Future of Prices," *Proceedings* of the Academy of Political Science, January, 1925, p. 90; Edward Taylor Bullock, "Did Labor Prosper During the War?" *The Survey*, October 15, 1921, pp. 75–76.

[1] See Chapter I.

[2] Family budgets were so completely discussed in Research Report No. 41, *op. cit.*, that only the briefest summary is presented here.

CHAPTER I

MEASURING THE COST OF LIVING

THE problem of measuring the cost of living has two aspects—first, the amount that it actually costs to live, and second, the extent to which these costs change from time to time or differ from place to place. These two problems again present several phases. One is whether the cost of living shall be measured from the point of view of expenditures, that is, what individuals or families actually spend regardless of the return in material goods or well being, or whether it shall be measured by a purely hypothetical concept of needs and the money cost of supplying them.

Expenditures as a Measure of the Cost of Living

From the standpoint of the individual or the family the sum spent for things which are considered by him or it to be necessary for proper existence, that is, the cost of meeting the requirements of the standard of living, is thought of as the cost of living. This amount is necessarily limited to a considerable extent by available income, although income is not necessarily a measure of the cost of living. Expenditures reflect individual tastes and managerial ability, but they also reflect periods of prosperity or depression, with their effects on wages and prices. On a given income, some families may do very well and others of the same size and composition may fare badly; some may be so situated as to have a decrease or an increase in income completely alter their scale of living; others may adjust themselves with neither abnormal loss nor ostentatious gain. Again, regardless of individual taste or managerial ability, expenditures among certain groups are perforce affected by changes in income, and among all groups they are affected by changes in the price levels of the goods and services for which expenditures are made. Thus, the cost of living, from the point of view of individual or family expenditure, may be measured only by knowing how families actually spend their incomes and what they get for them.[1] Changes in costs, where this is used in the sense of expenditures, reflect together changes in incomes, changes in living standards, and changes in prices.

The study of the cost of living, from the point of view of expenditures, is seen to be largely sociological, shedding light on the manner in which people live; how they spend their incomes; how these expenditures differ among various racial, occupational, and economic groups; the effect of geographical location, of business prosperity or depression, and of the size and composition of the family.[2]

Prices as a Measure of the Cost of Living

The cost of living, from another point of view, may mean a balanced combination of average retail prices. In determining the combination to be used, consumption by normal families in a normal period may be taken as an indication of the kind and quantity of articles ordinarily used. Or, for families of any given economic or social status, these quantities may be arbitrarily assigned on the basis of scientific tests of needs at a specified standard, such as calorie food requirements, cubic content of housing, and the like.[3] As the basis for measuring changes in the cost of living, average or normal standards rather than minimum are used.

In either case, these goods and services are then priced and prices are combined in accordance with the quantities determined to be necessary for a balanced consumption. The importance of each item in total consumption is a "weight" and the cost of living is a "weighted" total, meaning that the cost of each of the numerous goods and services

[1] Of course, both actual expenditures and changes in expenditures are usually measured by an average of a number of individuals or families in order to present a general picture.

[2] For list and description of the more important American studies of family expenditures, see Research Report No. 41, *op. cit.*, Chapters I and II.

[3] As will appear later, the theoretical determination of clothing and sundries requirements, even at a minimum standard, is as yet practically impossible. Consumption data are available, however, from which to work out a fairly satisfactory pragmatic basis. For requirements at a standard above the minimum, where there is more margin for the exercise of preference, selection of samples becomes of necessity entirely a matter of judgment.

entering into the cost of living has been given a value in the total cost equal to its importance in the total average or representative consumption. Differences in the cost of living from the standpoint of the retail price level, from place to place and from time to time, may be ascertained by collecting retail prices of the goods and services listed in the budget, combining them with their consumption weights and comparing the total from one place or from one period to another.

Studying the cost of living from the point of view of the price level is of interest as affording a quite different series of comparisons from that afforded by an analysis of expenditures. The price level study shows the cost of obtaining the goods and services required for a balanced consumption at any given time or place or among any specified group, and usually refers to minimum requirements for any specified standard. These costs may be compared from time to time in the same place or, if taken on the same basis, at the same time, from place to place.

The Technique of Measurement

Interest in the cost of living within the past ten years has depended largely on the necessity for adjusting the price of labor, which is wages and salaries, to prices of the things which wages and salaries buy. It has been concerned primarily with the establishment of the minimum cost of living, and with differences in the average cost of maintaining any given standard of living, both from time to time and from place to place, on the basis of changes in the price level and not of expenditures. The technique of measurement has developed, therefore, along two lines. The first is designed to establish the actual cost of maintaining a specified standard of living, usually designated as the minimum; and the second, to determine how average costs differ from time to time and from place to place.

The measurement of the actual cost of living has in turn been adapted to meet special needs. The first adaptation may be said to depend on the wage requirements. For a man's wages, up to the present time in this country, the assumption has been that it should cover not only the cost of his own support but that of the support of a family as well; for a woman, the standard thus far has been a self-dependent woman living apart from a family group, without home responsibilities. Both of these standards are coming in for more and more question,[1] but this problem will not be discussed in the present report, since it has to do with the uses to which the cost of living data are to be put and not to the data themselves.

The second adaptation of methods for measuring the actual cost of living relates to the standard of living. One type of budget[2] attempts to determine, for a given group in a given place at a given time, the cost of maintaining a minimum American standard of living at the local prices of goods and services consumed; the other attempts to measure a somewhat higher standard of living, regardless of existing conditions, on the theory that these existing conditions do not meet satisfactory requirements.[3]

THE ACTUAL COST OF LIVING

Family Budgets

Studies of family expenditures antedate studies of the retail price level. This is because the earliest interest in budgets was due to the fact that they afforded material for studying certain phenomena related to the family life and economy of given social groups. Thus in 1901 the United States Bureau of Labor Statistics[4] studied the income and expenditures of 25,440 families of wage workers and small salaried employees in 33 states, for the purpose of finding out not only how much it cost them to live but also to learn the sources of income and what part of it was laid out for each of the various items of expenditures, and how each of these varied in different parts of the country, with the size of the family.[1] Mrs. L. B. More collected and analyzed 200 family budgets in New York from 1903 to 1905 for the purpose of establishing the standard of living prevailing in the neighborhood.[2] R. C. Chapin in 1907 went a step farther. On the basis of a study of expenditures of 391 families, he attempted to determine the content and cost of a fair standard of living.[3] This was to be used as a norm for measuring the adequacy of poor relief. Miss Byington attempted by a study of family incomes and expenditures in Homestead, Pa., in 1907 and 1908 to picture the household life of a representative steel mill center.[4] The United States Bureau of Labor Statistics in 1908 sought to determine what was a fair standard of living for cotton mill operatives according to prevailing customs in northern and southern cotton mill communities.[5] The Kensington district in Philadelphia was surveyed in 1913 to 1915 to establish the prevailing standard and cost of living.[6]

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[1] See, for example, Paul H. Douglas, "Is the Family of Five Typical?" *Journal of the American Statistical Association*, September, 1924, pp. 314, 328; also, principles urged at the first conference of trade union women, called by the United States Government in 1918, *Monthly Labor Review*, November, 1918, pp. 190–191.

[2] Budgets of the cost of living are a plan for balanced expenditures; the term is used loosely to mean any itemized measure of the actual cost of living.

[3] The problems connected with making family budgets and the budgets themselves have been so extensively discussed in the National Industrial Conference Board's Research Report No. 41 as to require only the briefest summary here to make the present account complete. Cost of living budgets for wage earning women are only touched on, pending further more exhaustive study of the subject.

[4] The name of the present United States Bureau of Labor Statistics has been changed several times since its organization as the Bureau of Labor in the Department of the Interior in 1885. Its present name, Bureau of Labor Statistics in the Department of Labor, will be used consistently throughout this volume.

Most of the studies mentioned in the preceding paragraph contained estimates of the necessary minimum cost of living annually for a family of five persons on the basis of conditions actually prevailing. The usual method was to determine from the expenditures of the families surveyed the amount for which a satisfactory standard of living could be attained. It was but a step from these studies of what real families actually have and spend to the construction of theoretical budgets designed to show what they should have and spend to maintain a satisfactory standard of living.[1] It was not until 1915 that an attempt was made in this country to estimate the cost of maintaining a minimum standard of living on the basis of a theoretical budget for a theoretical family, at local prices.[2]

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[1] United States, Commissioner of Labor, Eighteenth Annual Report, "Cost of Living and Retail Prices of Food," Washington, 1903. This is the first important American study. As pointed out in the National Industrial Conference Board's Research Report No. 41, a number of significant studies of budgets had been made abroad prior to this; and in this country, both the state and federal governments had compiled data on the cost of living. These all lead up, however, to the monumental work of the United States Bureau of Labor Statistics in 1901.

[2] Louise Bolard More, "Wage Earners' Budgets," New York, 1907.

[3] Chapin, *op. cit.*

[4] Margaret F. Byington, "Homestead: The Households of a Mill Town," New York, 1910.

[5] United States, Bureau of Labor Statistics, Report on Condition of Woman and Child Wage Earners in the United States, Vol. XVI, "Family Budgets of Typical Cotton Mill Workers," 61st Congress, 2nd Session, Senate Document No. 645, Washington, 1911.

[6] Esther Louise Little and William Joseph Henry Cotton, "Budgets of Families and Individuals in Kensington, Philadelphia," Lancaster, 1920.

Although the purpose of each of the later cost of living surveys made on this theoretical basis was to determine the minimum cost of living, procedure soon divided. One group of estimates was related to conditions locally prevailing; that is, to prices of the goods and services actually consumed or available for use by families of the type whose minimum cost of living was being fixed;[3] the other was on the basis of a desirable standard, whether or not that standard could be maintained locally.[4] Since both were spoken of as the minimum cost of living, much confusion resulted.[5]

Obviously the first requirement in determining the cost of living on the basis of prevailing prices is to determine the standard of living, that is, the quality and quantity of the goods and services the cost of which are to be measured. To obtain a measure of the necessary quantities to be allowed, the size and composition of the family must be fixed. On the basis of these two considerations, a theoretical budget can be constructed, listing the requirements for one week or one month or one year, and the prices thereof can then be collected.

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[1] Expenditures by actual families have afforded evidence regarding consumption habits. Thus, the kinds and quantities of food consumed in 1901 by 2,567 families who are able to furnish detailed records regarding expenditures served until 1921 as the basis for weighting the retail food prices collected each month by the United States Bureau of Labor Statistics for their index number. A similar survey of 12,096 white families in 92 towns in 42 states in 1918 and 1919 served as the basis for weighting the retail prices collected by the Bureau of Labor Statistics for its cost of living index number. (See pp. 70, 71 of this volume.) A study by the Philadelphia Bureau of Municipal Research in 1916–1918 was used as the basis for constructing what was thought to be a fair minimum standard of consumption requirements. Bureau of Municipal Research of Philadelphia, "Workingmen's Standard of Living in Philadelphia," New York, 1919.

[2] New York City, Board of Estimate and Apportionment, Report on the Cost of Living for an Unskilled Laborer's Family in New York City, submitted by the Bureau of Standards to the Committee on Salary and Grades, 1915; *ibid.*, Report on the Increased Cost of Living for an Unskilled Laborer's Family in New York City, prepared by the Bureau of Personal Service, 1917.

[3] Report on the Increased Cost of Living, *op. cit.*, National Industrial Conference Board, Research Reports Nos. 22, 24; Special Reports Nos. 7, 8, 13, 16, 19, 21.

[4] These are described and summarized in Research Report No. 41, *op. cit.*, pp. 41–49. A few local surveys have since been made on the basis of the standard quantity and cost budget of the United States Bureau of Labor Statistics and local prices. Few of these have been published. A few wage arbitrations have produced new budgets, but for the most part these are based on new prices of a familiar list of goods and services.

[5] See, for example, Margaret Loomis Stecker, "Family Budgets and Wages," *American Economic Review*, September, 1921, pp. 456–457.

The Standard of Living

In determining the standards to be met, as just noted, two different ideals prevail. One aims to picture conditions as they are; the other, conditions as it is assumed they should be. The first of necessity reflects any existing inadequacies, such as improper housing or peculiar dietaries, as well as such insufficiencies as are the result of inadequate incomes; but it pictures the prevailing price level. The second type of budget is hypothetical to the extent that the goods and services required for its realization are not locally consumed, even though they may be part of the consumption habits of some families somewhere.[1] On the other hand, such inadequacies in prevailing standards of goods and services consumed as are due to lack of wherewithal to purchase them would probably be remedied in time if incomes were adjusted so as to make the demand for them effective.

The possibly non-existent or theoretical local standard has been justified as the only means of bettering unsatisfactory conditions;[2] the portrayal of costs as they actually exist has been advocated as the only means of picturing reality. As a matter of fact, each standard has its place and may be used so long as it is adequately described. It should be clearly understood, however, that the first standard pictures the minimum retail price level, and that the second is purely imaginary, to the extent that its cost is not based on local means of meeting the standard specified. The fact that some families somewhere are meeting the specifications is no argument for their local application.

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[1] See, for example, Stecker, *op. cit.*, pp. 454–456, for some of the methods used in reaching estimates of the minimum cost of living on this basis.

[2] See, for example, review by William F. Ogburn of Research Report No. 41, *op. cit.*, *Journal of the American Statistical Association*, June, 1922, pp. 284–286.

The Size of the Family

The actual cost of living depends not only on the standard of living depicted, but on the unit to which it applies. For a man, this has quite generally been assumed to be a family consisting of himself, a wife and three children under fourteen years of age. This family of five has been justified on the ground that three children are necessary if the race is to perpetuate itself and increase.[1] The assumption that such a family is typical leads to some manifest absurdities. For instance, the three children in these theoretical families are all supposed to be under fourteen years of age. If the number of census families in 1920[2] (24,351,676) were multiplied by three, the result would be 73,055,028 children under fourteen, whereas in fact there were only 33,612,442 under fifteen at that time.[3] Or, if all the children under fifteen were distributed among the separate families in the United States, each family would average 1.4 children fourteen years of age or less, instead of more than twice that number. The census family of 4.3 persons in 1920[4] must, therefore, contain at least one person fifteen years of age and over, in addition to the parents. Of course, many families are larger than five; many working men have no families at all; others have families in which there are one or more wage earners beside himself.[5]

The unit for measuring the cost of living seems never to have been questioned, so long as the use of budgets was largely academic, or so long as they were the basis for adjustments in individual families where allowances for differences in needs could be made, or even when used as a means of comparing the price level from time to time or place to place. When, however, they came to be used as a measure of minimum wage rates, it became necessary more nearly to approximate reality, and apparently the family of five as a unit is by way of being abandoned in the near future.[1]

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[1] See, for example, Ogburn, *op. cit.*

[2] The census definition of family is a group of persons, whether related by blood or not, who live together as one household, usually sharing the same table. United States, Bureau of the Census, Fourteenth Census of the United States, 1920, Washington, 1922, Vol. II, p. 1265.

[3] *Ibid.*, p. 154.

[4] *Ibid.*, p. 1266.

[5] Research Report No. 41, *op. cit.*, pp. 53–59; see Paul H. Douglas, "Is the Family of Five Typical?" Journal of the American Statistical Association, September, 1924, p. 314.

The Cost of Living of Single Women

Cost of living budgets for single wage earning women, like cost of living budgets for workingmen's families, developed first as a matter of general sociological interest.[2] The growing interest in minimum wage legislation in this country in the first decade of the century produced a further series of reports on living conditions of women workers.[3] A few states attempted to collect itemized accounts of expenditures as a basis for setting minimum wage rates, but for many reasons these were not entirely satisfactory, and this method was for the most part abandoned in favor of a theoretical quantity budget, adapted to different occupations and local prices.

The standard uniformly followed by all the states was based on the needs of a self-dependent woman living apart from a family group, without assistance and without dependents.[4] The adoption of this standard has sometimes been criticized on the ground that the bulk of American wage earning women are not living in this manner but as integral parts of family groups, where their cost of support is lower than for a woman living independently.[1] Its use has been retained because it is the simplest measure of the cost of living for a single woman, and because many persons believe that the cost of the complete support of such a woman at home is little if any less than it would be if she were living independently.

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[1] See, for example, Paul H. Douglas, "Wages Regulation and Children's Maintenance in Australia," *Quarterly Journal of Economics*, August, 1923, pp. 643–686; *ibid.*, "Family Allowances and Clearing Funds in France," *Quarterly Journal of Economics*, February, 1924, pp. 250–293.

[2] Massachusetts, Bureau of Statistics of Labor, Fifteenth Annual Report, "The Working Girls of Boston," Boston, 1884; Louise Marion Bosworth, "The Living Wage of Women Workers," New York, 1911; Report on the Condition of Women and Child Wage Earners, *op. cit.*, Vol. V, "Wage Earning Women in Stores and Factories," Washington, 1910.

[3] A few of these may be noted as follows: Massachusetts, Commission on Minimum Wage Boards, Report, Boston, January, 1912; Oregon, Consumer's League, Report of the Social Survey Committee on the Wages, Hours and Conditions of Work and Cost and Standard of Living of Women Wage Earners in Oregon, with Special Reference to Portland, Portland, 1913; Connecticut, Bureau of Labor, "The Conditions of Wage Earning Women and Girls," Hartford, 1914; Washington, Industrial Welfare Commission, Report on the Wages, Conditions of Work and Cost of Living of Women Wage Earners in Washington, Olympia, 1914; California, Industrial Welfare Commission, First Biennial Report, 1913–1914, Sacramento, 1915; Ohio, Industrial Commission, "Cost of Living of Working Women in Ohio," Columbus, 1915; Michigan, State Commission of Inquiry, Report into Wages and the Conditions of Labor for Women and to the Advisability of Establishing a Minimum Wage, Lansing, 1915; New York, Factory Investigating Commission, Reports, especially the Fourth, Albany, 1915, Vols. I and IV; Wisconsin, Industrial Commission, "Cost of Living of Wage Earning Women in Wisconsin," Madison, May 1, 1916.

[4] The Massachusetts Commission on Minimum Wage Boards is the only one that submitted an estimate of the cost of living for a woman living at home as a part of a family group.

Wage Implications

The significance of estimates of the actual cost of living based on conditions contrary to fact, both as regards the prevailing standard of living and as regards the unit of measurement, appears, of course, chiefly when related to wages. This problem will not be discussed here,[2] beyond pointing out that the assumption that every adult male wage earner's cost of living requires support for four dependents, and that every female wage earner needs enough to support her cost of living apart from a family group would result in a total annual wage bill in excess of the national income when allowances are made for taxes and capital improvements. If the principle of equal pay for equal work were recognized, based on the wages of a man, the deficit would be still greater. In the meantime, men with larger families would be inadequately provided for, and women with dependents would find their single standard wage insufficient to care for these.

Recognition of the shortcomings of these standards has resulted in new proposals for measuring the cost of living. One of these is that the unit shall be a man and woman, whose needs would be covered by a basic wage;[3] another is that the standard should be a single man's needs with enough in addition to permit saving for marriage.[4] Both of these include provision for increasing allowances for increased

[1] See, for example, Arkansas, Bureau of Labor and Statistics, Third Biennial Report, 1915–1916, Little Rock, 1917, pp. 15–16; Massachusetts, Department of Labor and Industries, Division of Minimum Wage, Men's Furnishings Occupation Decree (Revised) No. 23, 1922, p. 2.

[2] For criticism of certain uses of family budgets see Stecker, *op. cit.*

[3] Australia, Royal Commission on the Basic Wage, Report, Melbourne, 1920.

[4] Douglas, "Is the Family of Five Typical?" *op. cit.*

family responsibilities. Most of the plans call for meeting these extra needs through a tax on industry in proportion to the total number of employees, this tax to be deposited in a common fund, from which allowances would be made for dependency. If women also were included in this plan, and of course there is no reason why they should not be, differences in their cost of living based on their responsibilities would also be taken care of. While as yet this proposal is pure theory in the United States, it has found wide acceptance in a number of other countries, where the family wage system or the custom of family allowances is well established.[1]

INDEX NUMBERS OF CHANGES IN THE COST OF LIVING

The quantitative comparison of conditions at one time or place or under one set of circumstances with the same conditions at another time, place, or set of circumstances is usually expressed in a series of index numbers. An index number is computed by adopting certain conditions as a base and expressing other conditions as percentages of this base. A series of price or cost index numbers over a period of time is prepared by expressing the price of the same items on successive dates as percentages of the price on the base date. A series relating prices or cost in different places at the same time is computed by adopting one place or group of places as the base and expressing conditions in other places as percentages of that base. In the same way other types of index numbers may be constructed, the principal stipulation being that the things compared shall, in fact, be comparable. The more extensive or inclusive and the more representative or normal the base is, the more likely it is that peculiar conditions will be minimized. Thus an average of several years or of several months is better than one year or one month; an average of all the localities to be compared is better than any single one.[2]

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[1] Mary T. Waggerman, "Expansion of Family Wage System in France and Belgium," *Monthly Labor Review*, October, 1923, pp. 777–793; *ibid.*, "Family Wage System in Germany and Certain European Countries," *Monthly Labor Review*, January, 1924, pp. 20–29; "Wages and Allowance for Worker's Dependents," *International Labour Review*, September, 1924, pp. 470–485.

[2] Unless, of course, one place is the center of interest.

Among the cost of living index numbers, the time series is the only one that has been regularly maintained, although obviously the place series could be computed, so far as mathematical calculations are concerned, if the data were available. For both series the important considerations are (1) the possession of a sufficient knowledge of the standard of living and consumption, so that each price may be given its proper importance or weight in relation to the whole; (2) since the entire budget usually cannot be priced, securing prices of a sufficient part of the budget to represent the total adequately; and (3) the maintenance of the same standards in comparisons from time to time or place to place.

Time Series

In constructing a time series of cost of living index numbers it is necessary: (1) that the base period shall represent average or normal conditions; (2) that there be such a knowledge of consumption by the particular families represented in the base period as to permit a combination of price changes that will give proper weight to the relative importance of each; (3) that if comparative costs are not measured by an absolutely complete budget, the sample be sufficiently large and well chosen as properly to represent the whole; (4) that prices be collected in shops in which the type of family whose cost of living is being measured trade; and (5) that the same standards shall be consistently maintained throughout the period the series covers.

The working out of these principles is illustrated in the index numbers described in Chapters II, III and IV of this volume, and comparison of results by different methods is made in Chapter V. Of course, the larger the sample and the more frequently prices are collected, the greater the value of the series. Such series at best are expensive to construct, however, and the choice often lies between a method which permits an intensive study of a small sample at long intervals and a more extensive study of a larger sample at more frequent intervals. In any event, the results attained can not be precise and, although in the existing series the index numbers and weightings are frequently carried out to the decimal point, this gives a semblance of accuracy that is not warranted by the basic data and is justified only by the desire to measure every little change in the trend.

Place Series

Place series index numbers of the cost of living involve the same considerations as time series in that it is necessary to be certain that only comparable items are being compared and that this standard is consistently maintained. Obviously this requires a comparison for the same type of family, of the same economic and social status, at the same period of time. Comparisons of estimates of expenditures or costs in different places, made by different investigators at different times are, therefore, well-nigh impossible, especially within the past decade of rapidly changing price levels.

The United States Bureau of Labor Statistics, however, in 1918 and 1919 surveyed 92 localities, at approximately the same time, by common methods. Expenditures by families of wage earners and low or medium salaried workers for a year were taken; the period covered ranged from the year ending July 31, 1918, to the year ending February 28, 1919; 75% of the data covered practically the year 1918. In 31 of these cities prices have been collected regularly since the time of the original survey.

For all practical purposes, the data available regarding the cost of living in these cities was comparable when collected,[1] inasmuch as the schedules of inquiry used were identical and the standards specified for the families to be scheduled were the same.[2] They may be made comparable for certain subsequent dates by adding or subtracting the known percentages of changes in the price level in each city within specified periods since, thereby obtaining figures comparable with the original cost of living data. Such a comparison, when reduced to index numbers, using the average cost in the country as a whole as 100, reflects the relative cost of living in different places according to conditions as they actually were in 1918 and as they have shifted with changing prices since that time. The method and the results are shown in Table 2.

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[1] Although the investigations were made at slightly different times in 1918 and 1919, the Bureau of Labor Statistics assumes all original costs to have been as of December, 1918.

[2] See pp. 68–69 of this volume.

This method has certain limitations. The base from which changes are calculated for the separate cities is expenditures within a twelve-month period of slightly different months; the expenditure base for the country as a whole is an average of 92 cities, while changes in the price level are calculated as the average for 32 cities. As an index of the relative cost of living in these separate places, compared with a common unit, the error is not so great as to cause any serious discrepancy regarding their respective standings. At least, it is sufficiently accurate to answer the question frequently asked regarding the relative cost of living in one place as compared with that in another.

What has been done in Table 2 for the budget as a whole on certain dates may also be done for each of the major items and for other dates. Relative expenditures necessary for housing, for example, which is largely a local matter and one of exceeding importance to the average person of small or moderate means, may thus be shown. The accommodations available will differ, of course, from city to city, but in each instance those most usually occupied by the wage-earning population will be covered, thus giving a fairly adequate picture of relative rents from place to place. The other dates for which calculations may be made are found with the necessary data in the appendix to this report.

Purchasing Value of the Dollar

The purchasing value of the dollar is the reciprocal of an index number of prices. That is to say, if goods which cost one dollar in the base period, for example, July, 1914, cost $2.045 six years later, one dollar on the latter date would purchase goods worth only 48.9 cents, judged by the earlier purchasing power. In other words, one dollar in July, 1920, was only 48.9% of the dollar in July, 1914. The complete series of figures showing relative costs and relative purchasing values based on National Industrial Conference Board index numbers of the cost of living are shown in Table 24 of this volume and clearly indicate the method.

TABLE 2: COMPARATIVE COST OF LIVING IN CERTAIN CITIES IN THE UNITED STATES, ON SPECIFIED DATES[a]

(Cost of Living in the United States=100)

	December, 1918		June, 1920			December, 1924		
	Cost of Living	Index Numbers (United States =100)	Percentage Increase Since December, 1918	Cost of Living	Index Numbers (United States =100)	Percentage Decrease From June, 1920	Cost of Living	Index Numbers (United States =100)
Atlanta.....	$1,367.09	95.3	22.6	$1,676.05	94.2	21.7	$1,312.35	92.5
Baltimore...	1,260.86	87.9	16.0	1,462.60	82.2	18.4	1,193.48	84.1
Birmingham	1,576.00	109.9	21.3	1,911.69	107.4	17.7	1,573.32	110.9
Boston	1,438.13	100.3	23.5	1,776.09	99.8	20.6	1,410.22	99.4
Buffalo.....	1,460.00	101.8	22.4	1,787.04	100.4	19.7	1,434.99	101.1
Chicago....	1,461.42	101.9	24.6	1,820.93	102.3	18.3	1,487.70	104.9
Cincinnati..	1,168.82	81.4	25.4	1,465.70	82.3	20.1	1,171.09	82.5
Cleveland...	1,532.82	106.9	28.5	1,969.67	110.7	19.2	1,591.49	112.2
Denver.....	1,334.62	93.0	24.5	1,661.60	93.3	20.0	1,329.28	93.7
Detroit.....	1,520.74	106.0	32.6	2,016.50	113.3	22.8	1,556.74	109.7
Houston....	1,450.64	101.1	20.8	1,752.37	98.4	19.7	1,407.15	99.2
Indianapolis.	1,308.66	91.2	26.1	1,650.22	92.7	19.2	1,333.38	94.0
Jacksonville	1,555.56	108.4	26.2	1,963.12	110.3	21.3	1,544.98	108.9
Kansas City, Mo......	1,387.95	96.8	26.3	1,752.98	98.4	23.6	1,339.28	94.4
Los Angeles.	1,320.82	92.1	27.7	1,686.69	94.8	13.0	1,467.42	103.4
Memphis...	1,529.76	106.7	23.8	1,893.84	106.4	17.8	1,556.74	109.7
Minneapolis	1,349.98	94.1	23.8	1,671.28	93.9	18.2	1,367.11	96.4
Mobile.....	1,446.24	100.8	20.8	1,747.06	98.1	20.8	1,383.67	97.5
New Orleans	1,291.44	90.0	20.4	1,554.89	87.4	15.0	1,321.66	93.2
New York..	1,525.72	106.4	23.6	1,885.79	105.9	19.5	1,518.06	107.0
Norfolk.....	1,684.92	117.4	23.0	2,072.45	116.4	22.5	1,606.15	113.2
Philadelphia	1,469.40	102.4	22.8	1,804.42	101.4	17.5	1,488.65	104.9
Pittsburgh..	1,417.10	98.8	24.4	1,762.87	99.0	16.2	1,477.29	104.1
Portland, Me.......	1,412.84	98.4	20.6	1,703.89	95.7	20.0	1,363.11	96.1
Portland, Ore......	1,524.45	106.3	22.0	1,859.83	104.4	22.3	1,445.09	101.9
Richmond...	1,357.38	94.6	22.0	1,656.00	93.0	19.0	1,341.36	94.5
St. Louis....	1,348.48	94.0	27.6	1,720.66	96.7	18.9	1,395.46	98.4
San Francisco and Oakland..	1,447.73	100.9	24.2	1,798.08	101.0	18.3	1,469.03	103.5
Savannah...	1,466.96	102.3	19.7	1,755.95	98.6	25.4	1,309.94	92.3
Scranton....	1,344.99	93.8	24.3	1,671.82	93.9	17.0	1,387.61	97.8
Seattle.....	1,546.37	107.8	23.9	1,915.95	107.6	20.3	1,527.01	107.6
United States	$1,434.37	100.0	24.1	$1,780.05	100.0	20.3	$1,418.70	100.0

[a] This table is constructed from data collected by the United States Bureau of Labor Statistics and reprinted in Research Report No. 41, *op. cit.*, and the appendix to this report.

SUMMARY

Although measurement of the cost of living first developed from a more or less academic interest in sociological and economic problems, and although the first investigations were conducted almost entirely from this standpoint, these data were eventually applied to questions of a practical nature. Thus, the adequacy of poor relief, the relative necessity for a tariff to protect the standard of living in different countries, and the sufficiency of wages have all been measured against required outlay for the maintenance of a minimum standard of living.

Starting with investigations of how families and individuals actually were spending their incomes, budgets were later constructed to indicate the cost of maintaining a proper standard. This involved a determination of typical family units and of the standards of living. Two standards have been generally recognized: the so-called American minimum, measuring the actual cost of maintaining a fair standard of living according to conditions prevailing in any given locality; the other, the so-called standard of health and decency, which is one not yet generally found among unskilled laborers' families, but which is the goal toward which they are striving.

The actual cost of maintaining any standard of living depends on how many persons it is designed to provide for. The units used up to the present time in this country have recently come in for an increasing degree of challenge and it is likely that in the near future adjustments will be made so as to bring the theoretical unit both for men and for women more nearly into harmony with actual conditions.

Nothing is more generally recognized than that the cost of living is a very specific problem, dependent not only on the standard of living, the size of the family, personal requirements of occupation and taste, but also on climate and geographical location with relation to transportation of necessities or nearness to supply. For this reason, the only absolute measure of the cost of living is that which is worked out for each particular family. In generalizing, the greater the area covered or variety of types included, the less faithful is the picture painted. Thus, those estimates of the actual cost of living are likely to be most exact which are related to a specified standard of living for a given group, as mine workers, street railway employees, cotton mill operatives, in a definite locality in a specified period of time. Those are most misleading which generalize about heterogeneous groups in a wide area, or which assume that standards or costs prevailing at one time and place are equally applicable at another time and place. There is no such thing as the cost of living or the minimum cost of living for any but the most homogeneous groups, in a limited area, within a specified period. A general index of changes in the cost of living is more nearly typical of specific localities, but adjustments to take account of local differences are frequently required.

For measuring differences in the cost of living, either from time to time or from place to place, any standard of living and size of unit may be used, so long as they are clearly defined and retained. For the reason that the cost of board and lodging does not change synchronously with changes in the cost of foodstuffs and house rents, changes in the cost of living of women living thus independently of a family group are not necessarily measured by changes in the cost of living based on the needs of a family, except as they themselves are a part of a family group.

CHAPTER II

INDEX NUMBERS OF THE COST OF LIVING, BY THE NATIONAL INDUSTRIAL CONFERENCE BOARD

THE oldest continuous index number of the cost of living for the United States as a whole is that of the National Industrial Conference Board. The origin of this number was an estimate made in June, 1918, of the increases in the cost of living within the war period, beginning in July, 1914. Originally, interest in measuring changes in the cost of living centered in changes within a selected period of time rather than in changes from what might have been considered normal conditions; hence the adoption of a single month, that of the beginning of the war, rather than an average of several months or years.[1] The same requirements conditioned the next estimate of changes in the cost of living, and the base period was kept at July, 1914. While theoretically a single month used in this way affords a less desirable base period than an average of a greater variety of conditions over a longer period, the use of this particular month throws no great irregularity into the series, owing to the fact that the increase between the immediately preceding pre-war year, 1913, and July, 1914 was probably not more than 1%.[2] The retail food price index number of the United States Bureau of Labor Statistics, based on average prices in 1913, is used in the National Industrial Conference Board series as a measure of changes in food prices, without conversion to the July, 1914, base. The base period of the Board's series is, therefore, somewhat broader than is apparent on the surface.

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[1] It is of interest to note that the first estimate of the United States Bureau of Labor Statistics was made on the same basis. It was later changed to a year's average. See Chapter III.

[2] This estimate is based almost entirely on the increase in food prices. See *Monthly Labor Review*, November, 1919, pp. 192–193. The Massachusetts Commission on the Necessaries of Life estimated an increase in Massachusetts of 2.1% in this period, including increase in the cost of food, clothing and shelter. Report, 1920, *op. cit.*, pp. 20, 118.

With July, 1914 as the base period, a number was computed in June and November, 1918, and in March, July and November, 1919. In 1920 and in the years following, numbers have been constructed each month. This series, together with interpolations for July, 1915, July, 1916, and July, 1917, for which dates little exact information is available, constitute a continuing measure of changes in the cost of maintaining substantially the pre-war standard of living[1] for families of small and moderate means. It is based on retail prices of goods and services representative of a complete family budget, combined in such a way as to give proper weight to each item in proportion to the expenditures therefor by wage earners' families before the war. The figures collected for months other than March, July and November of each year are on a somewhat more limited basis, as regards both localities covered and number of reports, than are those for the above mentioned dates. For this reason they will be discussed separately in the present volume. The series based on the more comprehensive surveys is given in Table 3 for all dates for which numbers are available. Chart 1 shows the same results in graphic form. The method of collecting and combining prices of the articles entering into the major items food, shelter, clothing, fuel and light and sundries, and of the major items themselves to obtain the change in the total cost of living, is described in the pages which follow. The detailed results are presented and analyzed in Chapter VI.

At the time of the Board's first estimate of the increase in the cost of living, great speed was necessary and there were no models to follow, either as to basic standards or methods of collecting and working out the data. For a number of years thereafter much attention was paid to studies of fundamental problems which at first were touched but lightly. Consequently, while in some instances estimates necessarily were used at first, later procedure pro-

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[1] It is recognized, of course, that customs and goods available for consumption change, but so far as possible every contingency here is protected.

Table 3: Index Numbers of the Cost of Living in Average American Communities on Specified Dates, July, 1914 to November, 1924, Inclusive, by Separate Budget Items

(July, 1914=100)

(National Industrial Conference Board)

Date	All Items	Food	Shelter	Clothing	Fuel and Light	Sundries
July, 1914	100.0	100	100	100	100	100
July, 1915	100.5	100	100	103	102	100
July, 1916	108.7	111	101.5	120	104	104
July, 1917	131.3	146	105	143	126	117
June, 1918	152.2	162	115	177	135	150
November, 1918	165.0	183	120	193	140	155
March, 1919	160.5	175	122	181	142	155
July, 1919	172.2	190	128	200	142	163
November, 1919	182.2	192	138	235	148	175
March, 1920	194.8	200	149	277	149	183
July, 1920	204.5	219	158	266	166	185
November, 1920	193.1	193	166	228	200	192
March, 1921	168.7	156	171	174	187	185
July, 1921	163.1	148	169	164	179	185
November, 1921	163.0	152	169	161	179	178
March, 1922	154.7	139	165	154	174	174
July, 1922	155.6	142	165	154	174	172
November, 1922	158.4	145	167	160	186	171
March, 1923	159.2	142	170	168	186	173
July, 1923	161.9	147	175	170	176	173
November, 1923	165.3	151	180	174	176	174
March, 1924	162.9	144	185	174	172	174
July, 1924	161.7	143	186	171	166	173
November, 1924	165.2	150	184	173	168	175

duced more exactly measured results. Where necessary, corrections of earlier estimates were made and noted; but for the most part, the number in later years is merely a refinement or standardization of earlier procedure.

Basic Budget

In order to determine how much the cost of living has increased within a given period, something must be known regarding the cost of living at the starting point. This may mean the establishment of a complete budget with all goods and services itemized so that a comparison of the aggregate cost on one date with the aggregate cost on another date on a percentage basis shows the change in the price level;[1] or, as is more usually the case, goods and services representative of the complete budget may be selected and priced. A comparison of changes in the cost of these, weighted so as to represent their importance in the total consumption of which they are a sample, shows the change in the price level. The latter method is used by the National Industrial Conference Board.

Since changes in the cost of living were to be computed with prices in July, 1914 as a base, it was thought that the standard of living prevailing at that time should likewise serve as the standard by which to measure the subsequent price level. There were, however, no comprehensive data at hand to show the average or prevailing cost of living among wage earners in the United States in 1914, or how wage earning families were distributing their expenditures among the various goods and services making up the total cost of living. As a substitute for these exact figures, an estimate was made, on the basis of existing data, of the proportions which would represent a fair allocation of outlay by families of small and moderate means.[2]

The most important budget used was that of the United States Bureau of Labor Statistics for the country as a whole in 1901;[3] another pre-war budget was one of Chapin's in New York in 1907.[4] To offset these, if any modification were needed to bring them more nearly in line with conditions in 1914, budgets collected in 1915 and 1917 were combined with them.[5] The result, although largely weighted by the Bureau of Labor Statistics budget of 1901, because it covered the largest number of families, was sufficiently different from it to reflect changes in the intervening years and very fairly depicts the relative importance attached to the different major items in the cost of living by average wage earning families in July, 1914. While no total expenditure requirements are expressed or implied in this distribution, it serves a convenient purpose if it be assumed that $1,000 annually was divided as follows: food, $431; shelter, $177; clothing, $132; fuel and light, $56; sundries, $204. The budget distributions used, the number of families represented and the methods of combining them to obtain the weightings adopted as representative of July, 1914 are shown in Table 4.

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[1] This method is used by the Visiting Housekeeper Association of Detroit.

[2] It will be remembered that information regarding either the quantities consumed or the money outlay for each separate item is necessary to weight prices of the numerous goods and services making up the total cost of living.

[3] Eighteenth Annual Report of the Commissioner of Labor, *op. cit.*, p. 101.

[4] Chapin, *op. cit.*, p. 70.

[5] U. S. Bureau of Labor Statistics, *Monthly Review*, March, 1918, p. 112; *ibid.*, April, 1918, p. 152; United States Railroad Administration, Report of the Railroad Wage Commission to the Director General of Railroads, Washington, 1918, pp. 87, 91; Dallas Wage Commission, Report of the Survey Committee, Dallas, 1917, p. 5.

TABLE 4: PERCENTAGE DISTRIBUTION OF EXPENDITURES FOR THE PRINCIPAL ITEMS IN THE ANNUAL BUDGETS OF WAGE EARNERS' FAMILIES

Authority, date, locality covered, number of families	Food	Shelter	Clothing	Fuel and light	Sundries	All items
United States Bureau of Labor Statistics						
1901: United States, 11,156 families......	43.13	18.12	12.95	5.69	20.11	100.00
1917: New York City, 608 families......	45.01	12.91	14.84	4.61	22.63	100.00
1917: Philadelphia, 512 families......	43.31	12.04	15.97	4.95	23.74	100.00
United States Railroad Wage Commission						
1915: United States, 265 families......	38.0	20.0	15.0	6.0	21.0	100.00
Dallas Wage Commission						
1917: Dallas, Tex., 50 families......	45.01	14.51	12.57	9.11[a]	18.80	100.00
Robert C. Chapin						
1907: New York City, 31 families with incomes $1,000 to $1,099	44.7	18.1	15.5	4.5	17.2	100.00
Average, weighted according to number of families......	43.13	17.65	13.21	5.63[b]	20.38	100.00

[a] Includes expenditures for ice, telephone, water and laundry, as well as for fuel and light.

[b] Includes Dallas, Tex. Excluding Dallas, the average proportion of the total expenditure for fuel and light is 5.61%.

Having determined a representative apportionment of the aggregate cost of living among its component parts in 1914, but not knowing, through the collection and analysis of consumption data, the complete details of the goods and services included, nor finding it practicable to collect, as often as would be desirable, prices of all the goods and services entering into a complete budget, it next became necessary to select a number of articles which adequately represent each item and to determine how these, in turn, should be weighted to represent the major group itself.

Shelter

The determination of housing requirements was based on careful study of prevailing standards and existing housing accommodations, and also of more general considerations, such as the demands of health, safety and sanitation. While, at first, inquiries related only to "housing such as is usually occupied by wage earners," by 1920 more definite specifications were made. It had been determined, for example, that health and comfort required four or five rooms for an average family; that, except under unusual circumstances,[1] modern dwellings for working men are built with bath rooms; that, except in a few large cities, none of them are heated. The standard adopted in 1920 and used ever since is, therefore, "a house or unheated apartment of four or five rooms with bath, such as are usually occupied by wage earners." Further than that, no specifications are made. In some places the rents secured are for cottages, in others, semi-detached houses; in others, two-family houses, flats or tenements. In each instance the character of the housing listed is that usually occupied by the families of working men. In large cities, several types of dwelling may be represented. The only common standard beyond the number of rooms and sanitary requirements is that they be the customary dwelling of wage earners in that locality.

Clothing

This item in the family budget is one of the most difficult to standardize, because of well-nigh unmeasurable differences in tastes and in the requirements of social, economic and climatic conditions. When the Board's first survey was made in June, 1918, a number of lists of clothing requirements at a minimum standard were available,[1] but none of these was adequate to measure the needs of average or normal wage earners' families. The necessity for speed at that time precluded an extensive survey of the field, but 25 articles of yard goods[2] and wearing apparel were chosen arbitrarily to represent different types of requirements.

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[1] Such as cottages in the southern cotton mill towns, for example; some of these are now being built with modern bath rooms.

These alone were not enough, however, to show clothing costs, since they meant little without data regarding relative consumption. Hence, clothing budgets also were constructed as a means of weighting price increases. These budgets showed what might be regarded as the clothing bought in one year, rather than as the clothing available in one year, since ordinarily a person's wardrobe will include a number of articles carried over from one season to another. The quantity allowances for the different articles and their basic prices were fixed after careful study of all the data available, and the final figures were those revised and agreed to by a number of wage earners and their families. At first, two sets of clothing budgets were made up, one of a somewhat better grade than the other, which required a smaller outlay in 1914. In November, 1918, these cheaper budgets were discarded, although in measuring the increase in clothing prices they had a certain influence for some time, due to the fact that the lower price goods apparently had increased in cost more than those of somewhat better grade.

In November, 1918, four other items were added to the original 25, and these have been retained ever since as the measuring unit of clothing price changes. No articles of children's clothing are priced. In 1918, a number of experiments were made with data collected regarding children's clothing, from which it was clear that boys' clothing prices changed in practically the same ratio as did the cost of clothing for a man, while the cost of girls' and little children's changed about as a woman's; the two combined were so nearly similar to the results attained when men's and women's only were used as to make the collection and tabulation of data regarding children's clothing appear unnecessary.[1]

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[1] More, *op. cit.*, pp. 235 ff; Chapin, *op. cit.*, pp. 165–166; Kennedy, *op. cit.*, p. 78; State of New York, Factory Investigating Commission, Fourth Report, Albany, 1915, Volume IV, pp. 1519–1530; 1660–1665; Report on the Increased Cost of Living for an Unskilled Laborer's Family, *op. cit.*, pp. 20–21; Report of the Dallas Wage Commission, *op. cit.*, pp. 15–16; "Family Budgets of Typical Cotton Mill Workers," *op. cit.*, pp. 145–146; 239–240.

[2] Prices of yard goods are not used in making up the final clothing budgets.

The standard of goods included in the clothing budget is indicated by its 1914 selling price. These were representative quotations for a fair grade of popular selling merchandise. With one exception they have no trade name and definition of comparability has been maintained through continuing comparability of prices. Where substitutions have had to be made to take care of changes in merchandise available, they have been determined on the basis of price, use and comparability of demand. The items included and their 1914 prices are shown below.

Wool Yard Goods	*1914 Price*
Serge	$1.00
Poplin	1.50
Broadcloth	2.00
Cotton Yard Goods	
Percale	.07½
Gingham	.10
Longcloth	.12½
Fruit of the Loom	.15
Voile	.25
Hosiery	
Men's	.15
Women's	.25
Knit Underwear	
Men's union suits	.50
Women's vests	.10
Muslin Underwear	
Women's combinations	1.00
Suits	
Men's	15.00
Women's	15.00

Coats	*1914 Price*
Men's	$10.00
Women's	10.00
Shirts and Blouses	
Men's work shirts	.50
Men's work shirts	1.00
Men's negligee shirts	1.00
Women's blouses	1.00
Men's overalls	.75
Shoes	
Men's	3.50
Women's	3.00
Gloves	
Men's dogskin	1.25
Women's cape	1.00
Hats	
Men's felt	2.00
Women's velvet	1.50
Women's straw	1.00

The trial clothing budgets used for weighting[2] the changes in price of the separate articles are as follows:

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[1] This was verified by the National Industrial Conference Board in later studies of the minimum cost of living in particular localities.

[2] Of course, these goods could be weighted on a percentage basis, but the original budgets have been retained throughout the series.

Man's Budget	*1914 Cost*
Suit	$15.00
Overcoat	10.00
Heavy trousers	3.50
Two shirts	2.00
Three work shirts	1.75[a]
Three pairs overalls	2.25
Shoes and repairs	9.00
Eight pairs hose	1.20
Five sets underwear	3.50[b]
Two night shirts	1.50
Collars and ties	1.50
Hats, caps, and gloves	5.00
Sundries	2.50
All articles	$58.70

Woman's Budget	*1914 Cost*
Coat or suit	$15.00
Wool dress	5.00
Wool skirt	2.00
Two cotton skirts	2.00
Four waists	4.00
Two house dresses	2.00
Three aprons	.90
Shoes, overshoes, repairs	6.65
Six pairs hose	1.50
Corsets	2.00
Six union suits	3.25[c]
Muslin underwear	3.20
Three petticoats	1.75
Three nightgowns	2.40
Hats	2.00
Gloves	1.50
Sundries	3.00
All articles	$58.15

[a] One at 75 cents, two at 50 cents.

[b] Three at 50 cents, two at $1.

[c] Three at 75 cents, three at 33⅓ cents.

Fuel and Light

The allowance for these items in the basic budget was originally predicated on rather incomplete knowledge of the amounts and proportions consumed. Careful survey later, however, showed that most of the earlier assumptions regarding the relative consumption of anthracite and bituminous coal, the use of gas stoves and whether or not gas or electricity was the principal medium of artificial light were well founded in fact.[1] From this survey it was established that, except in the northeastern section of the United States, where anthracite is practically the only domestic fuel, bituminous coal for many years has usually been burned for household purposes. Another relatively unimportant exception is that, in certain sections where natural gas is found, this is extensively used for fuel as well as for light. On a population basis, an equal amount of bituminous coal and anthracite is customarily burned for domestic purposes and about equal quantities of the stove and chestnut size anthracite are used.

The basic light budget, like that for housing, has necessarily been changed somewhat to conform with changes in the standard of living. Whereas in 1914 the principal source of illumination in workingmen's houses was gas, almost all houses built since then have provided electricity and many of the older ones have been done over to include this service. Thus, in order to secure lighting of a grade comparable with that prevailing in 1914, electricity must be taken into account. The determination of the exact point when that became necessary is, of course, arbitrary. While data regarding electricity were collected from the very beginning, these were not taken into account in the light estimate until 1922. In 1923 electricity was given a definite weight of one, and gas two, in the light allowance. This was in recognition of the fact that at the present time gas is used not only for cooking in the newer houses, but in many of the older places gas is still used for lighting, also.[1] The light index at the present time tends to be slightly higher than it would be if electricity had been included from the beginning, since, as will appear later,[2] electricity rates are actually below the 1914 level; but light carries so little weight in the total budget as not materially to affect changes in the cost of living as a whole.

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[1] See also United States, Bureau of Labor Statistics, "Cost of Living in the United States," Bulletin No. 357, Washington, 1924, p. 391.

While in each instance, therefore, the basic fuel questionnaire calls for prices of both anthracite and bituminous coal in ton lots for domestic use, the light questionnaire calls for the net rate per thousand on the first 2000 feet of gas and the net rate per kilowatt hour for the first 20 kilowatt hours of electricity. Changes in cost of these three items are taken as representative of the change in cost of the fuel and light group as a whole; hence prices of kerosene, wood, matches, and other possible fuel and light media are not covered.[3]

Sundries

Sundries comprise the miscellaneous assortment of goods and services not elsewhere specified. Thus, a large number of items more or less unstandardizable, totalling 20% of the budget, must be provided for. In June, 1918, when the

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[1] *Idem.*

[2] See pp. 68–69 of this volume.

[3] Originally efforts were made to consider wood, coke, oil and natural gas, but when the entire index number was standardized, these proved to be of so little consequence in the average total that they were dropped from consideration.

Board made its first estimates, the percentage of change in the cost of these items was placed at a purely arbitrary figure, based on an incomplete budget and an incomplete survey. As time went on, however, these items were standardized and a fixed budget for measuring price changes was established. It has always been clearly recognized that any selection of items and of consumption weights was necessarily a matter of judgment, but the goods and services listed at least give a good cross-section of the sundries items and may be used to represent changes in the cost of the whole.[1]

These items and the weights assigned to each were selected on the basis of a study of a number of family budgets showing how groups of families actually spent their incomes for this item.[2] For an allowance of $4.25 a week for sundries in 1914, the following distribution was adopted:

	Amount per Week	Weight
Carfare	$0.25	5.88
Medical,		
Doctor, nurse, hospital, etc.	.35	8.24
Drugs, toilet articles	.15	3.55
Reading, stamps, stationery, telephone	.60	14.12
Recreation	.45	10.59
Insurance	.50	11.76
Furniture, furnishings, supplies	.60	14.12
Church, charity, gifts	.50	11.76
Organization dues	.35	8.24
Candy, soft drinks, etc	.10	2.35
Tobacco	.40	9.41
	$4.25	100.00

While for some families in some places one item may be over-weighted and another may be under-weighted, the average for the country as a whole is apparently as fair a measurement of the distribution of pre-war expenditures for sundries as anything necessarily so arbitrary can be.

Food

Survey of existing data regarding retail food prices revealed, after exhaustive tests,[3] that the index numbers of the United States Bureau of Labor Statistics were substantially in accord with other reliable data regarding retail food price changes since the pre-war period. This was the only series available on a pre-war base for the country as a whole, and, being carried on substantially as the National Industrial Conference Board was making its own surveys of changes in the cost of the other major items in the budget, was adopted by the Board to measure this important item in its own series, to avoid duplication of effort. Through the cooperation of the Bureau of Labor Statistics, these figures have always been put at the disposal of the National Industrial Conference Board at the earliest possible moment. The method of constructing the basic food budget of the Bureau of Labor Statistics will be described in Chapter III.

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[1] See p. 77 of this volume for the samples priced by the United States Bureau of Labor Statistics, which differ in many respects from those of the National Industrial Conference Board.

[2] See Eighteenth Annual Report of the Commissioner of Labor, *op. cit.*, p. 648, and other family budget studies listed on pp. 19, 20, of this volume.

[3] Research Report No. 9, *op. cit.*, Chapter I.

METHODS OF COLLECTING AND COMBINING CURRENT PRICES

Except for a few sundries, prices of which are collected from chain store systems centering in New York City, all of the data collected by the National Industrial Conference Board for use in making up its index numbers of the cost of living are secured by correspondence, and relate to prices on or about the fifteenth of the month. This method permits a large coverage of reports in a great variety of centers at frequent intervals, rather than a smaller coverage less often, and must be judged on that basis. The questionnaires have been changed as time has gone on, in accord with experience gained in their use. Where questions arise in connection with the data furnished that cannot be answered satisfactorily, the information is dropped out until reconciliations can be made. In each instance the quotations previously furnished are inserted on the new questionnaire, so that comparable standards may be maintained. Where substitutions must be made, which happens practically only in the case of wearing apparel and other goods for which prices are collected on the clothing questionnaire, dealers are supposed to furnish quotations for comparable merchandise, which are linked on to the quotations previously furnished.

The cost of living index number of the National Industrial

Conference Board has undergone several changes looking toward greater inclusiveness, simplification and standardization, since its inception in 1918. As already noted, the first estimate of changes in the cost of living in 1918 was made with little precedent and untried sources of information. The basis was necessarily limited by the time in which the work had to be done and a number of estimates had to be made. As it turned out later, when these could be checked by more complete data, these early estimates were in almost every instance remarkably in accord with the facts.

In the present chapter attention will be centered on the method and coverage used in making up the National Industrial Conference Board index numbers of the cost of living. The detailed figures are given in Chapter VI.

Shelter

Information regarding rents is obtained by questionnaire from all but five of the cities in the United States having a population of 50,000 or over, and to places of less population, which, though smaller in size, are none the less important in their own sections of the country. These cities are listed in Table 14. From this table it is apparent that the number and representation of these cities have been increased from time to time, but that beginning in 1920 reports have been received regularly from approximately 165 cities, sometimes a few more, sometimes a few less. The average for the period starting in March, 1920 has been 479 reports from 167 cities. The largest cities have always been included and it is safe to say that seldom since 1920 has much less than 30% of the total population of the United States been covered in these rent surveys. The following classification shows the number of cities in each population group, the number reporting in November, 1924, and the respective populations represented, based on the census of 1920. Cities of less than 25,000 are not included in the census total, although in the last entry in the table the 15 smaller cities reporting to the Board are grouped with those having 25,000 to 50,000 population.

Not only have the largest and industrially most important cities been covered, but a good representation by geographical location is also given, including many smaller places.

Number of Cities in the United States Having Specified Population in 1920, Number of Such Cities Reporting Rents, and Population Thus Covered

Population Classification	Cities		Population of cities 25,000 and over			
	Total number, 1920	Number reporting, November, 1924	Total	Percentage of total	Total reporting, November, 1924	Percentage of total reporting, November, 1924
Cities of 500,000 and over	12	12	16,369,301	43.34	16,369,301	100.0
Cities of 250,000 to 500,000	13	13	4,540,838	12.02	4,540,838	100.0
Cities of 100,000 to 250,000	43	43	6,519,187	17.26	6,519,187	100.0
Cities of 50,000 to 100,000	76	69	5,265,747	13.94	4,812,043	91.4
Cities of 25,000 to 50,000	143	26[a]	5,075,041	13.44	988,633	19.4
Total 25,000 and over	287	163	37,770,114	100.00	33,230,002	88.0
Total population of United States	..	..	105,710,620	..	..	..
Percentage cities of 25,000 and over are of total	..	..	..	35.73	..	..
Percentage cities of 25,000 and over reporting in November, 1924, are of total population of United States	..	..	..	31.43	..	..
Percentage of all cities reporting, including those under 25,000[a]	..	..	..	31.67	..	..

[a] Fourteen cities having less than 25,000 population also reported.

Thus, in November, 1924, the 177 cities reporting were situated as follows: East, 62; Middle West, 67; South, 27; Far West, 21. Similar groupings on other dates show the same extensiveness of coverage.

The rent questionnaire calls for the average approximate rent of accommodations comparable with those on which quotations were furnished for July, 1914. These prices are supplied for the most part by real estate agents, although a few banks, chambers of commerce and social organizations closely in touch with the housing situation also furnish information.[1] The number of quotations secured differs with the size of the city and with local conditions. In some places a number of reports are required to complete the picture; in others, one is sufficient.[1]

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[1] Before sources of information were well established and data had to be secured by rather obvious means, a number of organizations were included as cooperators

From the rents quoted, a percentage of change is calculated for each agency separately, both between July, 1914 and the date of the current survey, and also between the date of the last preceding investigation and the current survey. These percentages of change are then averaged for each city and the average change during the last preceding period is related to the total change between July, 1914 and the last preceding index number. The total increase based on figures for July, 1914, and the current date is not used except as a check on the linked numbers. Inasmuch as rental conditions so frequently differ from one part of the city to another it has never seemed wise to express the final estimate for any given city in terms of a single percentage of change, although in making up the index of the total cost of living for the country as a whole, this procedure has necessarily been followed.[2] For prices varying as widely locally as is the case with rents, a range of estimates is as useful as exact data and may be more representative.

After estimates of the percentage of change in rents between July, 1914 and the date of the current index number have been made for each city separately, the cities are grouped on the basis of population and the average change for each population group is ascertained. This is weighted by the importance of each population group in the whole,[3] and the total is divided by the sum of the weights. Thus, the rent index number finally constructed for the country

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which further study revealed presented an abnormal picture in one way or another. Thus, the building materials operators were perhaps inclined to over-emphasize rent increases, some social organizations were dealing only with unusual conditions which could not be considered a true cross-section of industrial housing. These and other non-typical reporters were removed as their unrepresentativeness became apparent. In Table 14 certain corrections have been made to adjust rents in view of these discrepancies.

[1] For example, where the real estate board has representation of brokers handling rents of wage earners' houses in representative locations, resort to individual agents is an unnecessary duplication of effort.

[2] Originally rental data secured did not permit of so exact a method, but the tests used later in connection with the earlier data proved these estimates to be in line.

[3] Only cities of more than 25,000 are included.

as a whole is made up by taking into account different kinds of houses, a variety of possible landlords, the probability of a wide difference in conditions affecting rentals as between cities and often even as between different neighborhoods in the same city, and it gives a weight to the increase in proportion to the relative numbers affected. Because rents depend so largely on purely local conditions, it is possible that the index for the country as a whole may be inapplicable to many of the communities on which it is based. Each report on the cost of living published by the National Industrial Conference Board has called attention to this fact and has given the local data for any necessary readjustments.

Clothing

Comparative clothing prices are obtained by questionnaire from a varying number of merchants in a varying number of cities in the United States. These have gradually been added to and substitutions have been made at times, but since 1920 the general average has been 189 questionnaires returned from 76 cities. The cities from which reports were received in November, 1923, March, 1924, July, 1924, and November, 1924, and the number of reports from each are shown below.[1]

To some extent the number of reports received from each city corresponds to the size of that city's population, but it has not been possible to maintain that ratio continuously in all instances. Extensive field work[2] has established the fact, already hypothecated from statistical tests,[3] that changes in prices of dry goods and wearing apparel are more a matter of buying and selling policy of the stores reporting than of geographical location of the cities, and that, when changes in the prices of the different articles required for a balanced clothing allowance are combined in proportion to consumption, the change in the cost of the total from time to time is very similar in different parts of the country. Since no attempt is made to study clothing prices locally and all

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[1] For earlier coverages see Research Reports 9, 14, 17, 19, 25, 28, 30, 33, 36, 39, 44, 49, 54, 57, 60, 63.

[2] In connection with local surveys of the minimum cost of living.

[3] See Research Reports Nos. 9 and 14, *op. cit.*

NUMBER OF STORES FURNISHING ANSWERS TO CLOTHING QUESTIONNAIRES IN NOVEMBER, 1923, MARCH, 1924, JULY, 1924, AND NOVEMBER, 1924, IN SPECIFIED CITIES

Cities	Number of Reports			
	November, 1923	March, 1924	July, 1924	November, 1924
Albany, N. Y.	1	[a]	1	1
Atlanta, Ga.	2	2	1	2
Baltimore, Md.	2	1	2	1
Birmingham, Ala.	2	2	1	2
Boston, Mass.	10	11	8	10
Bridgeport, Conn.	3	4	4	3
Buffalo, N. Y.	5	7	5	6
Butte, Mont.	1	1	1	[a]
Camden, N. J.	1	1	1	1
Cedar Rapids, Ia.	1	1	1	1
Charleston, S. C.	1	1	1	1
Chester, Pa.	1	1	1	1
Chicago, Ill.	5	6	7	6
Cincinnati, Ohio	2	3	3	3
Cleveland, Ohio	2	1	1	1
Dallas, Tex.	2	2	2	1
Dayton, Ohio	2	1	1	1
Denver, Col.	3	3	3	2
Detroit, Mich.	7	7	9	8
Elmira, N. Y.	1	1	1	1
Fall River, Mass.	3	3	3	3
Fort Worth, Tex.	1	[a]	[a]	[a]
Grand Rapids, Mich.	1	2	1	1
Hartford, Conn.	1	1	[a]	1
Holyoke, Mass.	1	1	1	1
Huntington, W. Va.	[a]	1	1	[a]
Indianapolis, Ind.	3	3	3	3
Jersey City, N. J.	1	1	2	1
Johnstown, Pa.	1	1	1	1
Kalamazoo, Mich.	[a]	1	1	1
Kansas City, Mo.	1	[a]	[a]	2
Lincoln, Neb.	2	2	1	1
Little Rock, Ark.	1	1	1	[a]
Lockport, N. Y.	1	1	1	1
Los Angeles, Cal.	3	5	5	5
Louisville, Ky.	3	3	2	3
Lynn, Mass.	2	2	2	2
Macon, Ga.	1	2	1	1
Manchester, N. H.	1	1	1	1
Memphis, Tenn.	1	1	1	1
Milwaukee, Wis.	7	6	6	6
Minneapolis, Minn.	2	4	3	3
Mobile, Ala.	3	2	2	2
Nashville, Tenn.	1	2	1	1
Newark, N. J.	2	1	1	1
New Bedford, Mass.	1	2	2	2
New Haven, Conn.	2	2	1	2
New Orleans, La.	3	3	3	3
New York, N. Y.	5	8	8	7
Norfolk, Va.	2	2	2	2
Oakland, Cal.	[a]	2	2	1
Oklahoma City, Okla.	[a]	1	[a]	[a]
Omaha, Neb.	1	3	1	2
Philadelphia, Pa.	4	6	4	3
Pittsburgh, Pa.	1	2	3	2
Portland, Me.	[a]	1	[a]	1
Portland, Ore.	2	4	3	2
Providence, R. I.	4	3	2	3
Richmond, Va.	2	2	2	2
Rochester, N. Y.	2	3	2	2
Sacramento, Cal.	[a]	1	[a]	[a]
St. Louis, Mo.	4	3	5	4
St. Paul, Minn.	5	4	5	5
Salt Lake City, Utah	4	3	4	4
San Antonio, Tex.	1	2	2	1
San Diego, Cal.	1	[a]	1	1
San Francisco, Cal.	4	4	3	4
Schenectady, N. Y.	1	1	1	1
Scranton, Pa.	3	3	2	2
Seattle, Wash.	2	4	3	4
Sioux Falls, S. D.	1	1	1	1
Spokane, Wash.	1	2	1	2
Springfield, Ill.	1	1	[a]	1
Springfield, Mass.	1	1	1	1
Syracuse, N. Y.	1	1	1	1
Tacoma, Wash.	1	2	2	[a]
Toledo, Ohio	3	3	3	2
Trenton, N. J.	1	1	1	1
Troy, N. Y.	1	1	1	1
Utica, N. Y.	1	1	2	1
Washington, D. C.	1	4	2	2
Wilkes-Barre, Pa.	1	[a]	1	1
Wilmington, Del.	1	[a]	[a]	[a]
Wilmington, N. C.	1	1	1	1
Worcester, Mass.	2	2	2	2
Youngstown, Ohio	1	1	1	1
Total number of reports	170	194	176	172
Total number of cities reporting	80	80	78	78

[a] No report.

are combined in an index for the country as a whole, a number of single questionnaires from a number of different cities furnishes as good an index of changes in clothing costs, or better, than an equal number of reports from one city. One-quarter of the total population of the United States was covered by the cities from which clothing prices were secured in November, 1924, in a variety of cities, distributed so as to represent different geographical locations and to meet a range of climatic requirements.

Just as is done for rents and the cost of other major items in the family budget, the questionnaires mailed to merchants cooperating in supplying clothing prices contain, each time for each item, the quotation last previously furnished. Where new merchants are brought in, the 1914 price and the average of quotations furnished by all dealers reporting on the last preceding date are supplied. This method has been found a satisfactory means of standardizing the goods on which quotations are secured and maintaining comparability through time.

For each of the 21 articles on which the clothing budget is based a simple average of quotations for the country as a whole is computed, and the percentage of change in cost of each since July, 1914 is ascertained. These percentages are then used in making up the clothing budget, by applying each percentage of change in cost to the cost of the same articles in July, 1914. Since, however, prices are not secured for all of the items in the clothing budget, price changes for the goods representing them are used. Thus, for example, the allowance for a man's heavy trousers in the current budget is determined by the average percentage of change in the combined cost of the overcoat and the suit; for women's house dresses, one and one-quarter times the change for men's negligee shirts is used. These and a few other applications are not arbitrary but have been worked out through careful analysis of the materials, method of production and marketing of the various items. For collars, ties and clothing sundries, both men's and women's, however, the allowance is arbitrary, based on a liberal addition to whatever increase is shown for the budget as a whole and a small decrease when the cost of the rest of the budget is declining.

Having made up the money cost of the year's hypothetical purchases of clothing for a man and a woman, these are then combined and the percentage which the total on the current date is of the total in July, 1914 shows the index number for clothing on the current date.[1]

Fuel and Light

As for other items in the basic cost of living budget used by the National Industrial Conference Board in making up its index numbers of the cost of living, the number of reports and the territory covered by the fuel and light data have increased greatly since the original survey was made in June, 1918. At that time a variety of data were used, including estimates by others as well as replies to a simple questionnaire from the National Industrial Conference Board, to determine how much the cost of coal had increased. For this first survey, 22 coal dealers in 21 cities replied to the Board's questionnaire. Since 1920 the number of replies from coal dealers has varied from time to time, but the average has been 162 dealers reporting from 59 cities. In November, 1923, 170 dealers in 60 cities reported; in March, 1924, 168 in 63; in July, 1924, 169 in 63; in November, 1924, 169 in 65.[2] For light, also, far more precise data are now used than in the early days.

Fuel: The cities from which coal prices are secured are, for the most part, those included in the clothing, rent and food surveys. Together, they represent approximately one-quarter of the country's total population. They are shown, along with the percentages of change in the cost of coal in each, in Table 19.

Prices are collected on ton lots of anthracite in stove and chestnut sizes and of bituminous coal for household use. Quotations secured in each city are averaged separately for each of three kinds of coal,[3] and the percentage of change in that city is found by comparing average quotations on the current date with average quotations in July, 1914.

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[1] Prior to July, 1919, the clothing estimate was not an exact average percentage of change, but was somewhat greater than the figures showed, because of the belief that the less expensive goods had increased in price more than those for which the Board collects quotations. By July, 1919, this difference was not so marked and since then a straight average has been computed. See Table 18.

[2] For earlier coverages see Research Reports Nos. 9, 14, 17, 19, 25, 28, 30, 33, 36, 39, 44, 49, 54, 57, 60, 63.

[3] Unless one or another kind of coal is not in the local market.

Similar procedure is used in making the estimates of change in the four geographical divisions. For the country as a whole, the percentage of change within the last preceding four-month period is applied to the last preceding index number based on July, 1914.[1] Both the index numbers for the country as a whole and for the four separate divisions are unweighted except as the number of quotations received from each city practically gives them due weight in the total.[2]

As already noted, it has been found that where anthracite is used as domestic fuel, about equal quantities of stove and chestnut are burned for household purposes. The percentages of change since July, 1914, for stove and chestnut are, therefore, averaged to find the average for anthracite as a whole. This figure is again averaged with the increase for bituminous coal to get the change in the cost of coal as a whole since July, 1914.

Light: Securing intelligible data regarding changes in light costs is extremely difficult, owing to the variety of conditions affecting cost in addition to rates. First, there are discounts for prompt payment, usually 10% if the bill is paid in ten days. Then, since 1914, many extra charges have been added, such as for use of the meter, service and other conditions attendant on the use of gas or electricity.[3] Methods of measuring the quantity consumed differ and in a number of instances these have been changed since July, 1914.

Without precise tests it is obviously impossible to determine the change in cost involved in changing, let us say, from the candle power system of measuring the amount of gas consumed to the British thermal unit system. Such a change

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[1] In the tables printed in the various reports on changes in the cost of living and in Table 19, the total for the United States is the unweighted total obtained by comparing the average cost on the current date with the average cost in July, 1914. At times there has been a difference of a point or two between the index figured this way and one computed by the chain method.

[2] The cities are so evenly distributed by population groups as apparently to make any weighting unnecessary.

[3] In Denver, for example, it is reported for electricity that "there are in addition to this schedule a demand plus energy rate for residence lighting service, and customer charge plus demand charge plus energy charge rate for all lighting service. The average effect of these last two rates depends very materially upon the load factor of the customer."

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may require the purchase of new gas mantles or other fixtures in addition to whatever change there may be in the number of cubic feet of gas burned to get an equal amount of light. Again, the quality of the gas may be changed, with or without a change in rate, so that for the same quality of illumination or the same quantity of heat it may be necessary to burn more cubic feet of gas. All of these factors add to the cost of securing the same amount of heat or illumination, even though the rates themselves may remain the same or may actually have decreased. What is true of gas is true to a considerable extent of electricity. Rates in many instances were lower in 1924 than in 1914,[1] but extra charges and new ways of measuring the amount of light used have in some instances meant greater cost to the consumer.

To measure changes in the cost of light, the National Industrial Conference Board has adopted two different means. Once each year a questionnaire is sent to the public service commissions in all of the states having cities with a population of 50,000 or over in 1920, and in some cases, where the public control of the utilities is left to the individual municipalities, to the mayors of separate cities also. This questionnaire asks for each city the net rate per thousand for the first 2,000 cubic feet of gas for domestic use, and for the net rate per kilowatt hour for the first 20 kilowatt hours of electricity. In addition, letters of transmittal call particular attention to the necessity of reports on extra charges, changes in methods of measurement, etc. As a further check on changes in light costs, each rent questionnaire asks a similar question, regarding gas only, of all those who furnish information regarding rents. From both sources of information regarding light approximately the same number of cities make returns as report on rents; the same population is represented and the same method of weighting reports according to population is used.

Thus, while detailed and complete information is received once a year regarding both gas and electricity, on intervening dates reports are received only for gas. This covers two-thirds of the usual wage-earning family's expenditure for gas and electricity combined and, since the two together require less than 2% of the total cost of living, it is thought to be a sufficiently adequate indicator.[1]

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[1] See, for example, Table 6 of this volume.

When data are available for both gas and electricity, the change in total cost of each, *i. e.*, in the rate per thousand for the first 2,000 cubic feet of gas and per kilowatt hour for the first 20 kilowatt hours of electricity, less discounts and plus extra charges, is computed on a percentage basis from one survey period to another, in each city separately. These percentages are then averaged and weighted by population. These weighted averages of change in cost within the last investigation period are then applied to the last preceding index numbers based on July, 1914, as 100, to obtain the new index numbers for gas and electricity respectively for the country as a whole. These separate indexes for gas and for electricity are then combined by weighting gas two and electricity one. The result is the final estimate for changes in the cost of light since July, 1914. In the interval in which changes in gas costs alone are used, the same method is followed, except that there is no weighted combination with electricity.

This method of obtaining and combining information regarding changes in the cost of gas and electricity is the most satisfactory of any of several which have been used by the National Industrial Conference Board, due to the fact that local conditions greatly affect the cost and changes in the cost of these services. In 1918 and 1919, efforts were made to secure from the trade associations in the gas and electric light industries up to date information regarding the retail cost of gas and electricity to small consumers for household use. The type of information assembled by these organizations for their own use was somewhat different, however, from that required for a cost of living index, and adapting one to the other was attended with difficulty. Only general estimates, therefore, were possible, and it was not always practicable to keep these up to date. Beginning in 1920, reports from the public service commissions, with interim reports on gas only, were instituted. This involved a slight correction in estimates for light, previously furnished, which was made in November, 1920.[1]

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[1] Electricity is coming into more common use as new houses are built. The change from gas to electricity as a medium of light constitutes one of the changes in standards of living measurement of which is extremely difficult.

Sundries

Although all of the goods and services which together are called sundries required one-fifth of the average working class family budget prior to the World War, they satisfy a wide variety of wants. The sources of information regarding their prices are widely scattered. There is more leeway for the exercise of taste and discretion in purchasing them than is true of any other major item of expenditure, and standardization is correspondingly difficult. To collect and compute price changes for all of these items as frequently as is necessary is laborious and expensive, even with a sampling method, and whatever short cuts are possible without the sacrifice of reasonable accuracy have therefore been employed.

As already noted, the selection of a list of items, changes in the cost of which will adequately represent necessary changes in an average family's expenditures for sundries with changes in prices, is not simple. What one group might consider essential, others would feel they could do without. The selection thus becomes arbitrary and different agencies will choose differently.[2] For the dozen items included in the National Industrial Conference Board list a variety of sources of information and methods of computing the changes in cost are used. For all of them, the general method which is followed is first, finding the percentage of change in cost from the last preceding index number date to the current date; second, applying this percentage of change to the money allowance on the last preceding date, for that particular item; third, finding the money allowance on the current date which would be comparable with the money allowance for the same item in July, 1914. When the money allowance on the current date has been made for each sundries item the total is found and compared with the total for the same items in July, 1914. The percentage the cost on the current date is of the cost in July, 1914 gives the weighted index number for sundries as a whole. For the separate items, the procedure is described in the following paragraphs.

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[1] See Research Report No. 33, *op. cit.*, p. 24.

[2] See, for example, the list of miscellaneous items priced by the United States Bureau of Labor Statistics. Dentist, spectacles and laundry occur on their list but not on that of the National Industrial Conference Board, whereas the latter includes insurance, church, charity, gifts, organization dues, candy, soft drinks, which are not included in the Bureau of Labor Statistics list.

Carfares are obtained for each city from which reports are received regarding rents, on the same questionnaire. The exact measurement of changes since July, 1914, or between any two dates since, has become extremely complicated by the fact that a number of conditions may affect the increase in the cost of a ride for a given distance. For example, a system of tickets at reduced rates per ride may have been abolished in favor of a flat cash fare, or a flat fare may have been superseded by tickets at a higher rate but one not so high as the cash fare which is their alternative. A flat cash fare or a system of tickets with free transfer may have been replaced by either or both, with a few extra cents for transfer or with no transfer privilege at all. Again, a ride limited only by the length of the line may have been broken up into zones, with fares for each, sometimes at a rate higher than the ride for the entire distance previously; or a zone system may have been re-zoned with or without changes in rates. These are neither all nor the most complicated of the factors which enter into an effort to measure changes in carfare with any degree of exactness.

The National Industrial Conference Board has made its estimates of change on the assumption that where tickets are issued they will be used, that transfers are not needed, and that a fixed number of zones within a given city is an average ride. The percentage of increase in each city since July, 1914, on subsequent dates, is found on that basis. These increases are combined on a population basis similar to that used for rents and the cost of light; the weighted increase is applied to the basic allowance for carfare in July, 1914, to determine how much more the family which spent, on the average, 25 cents a week at that time would have to pay on subsequent specified dates for the same service.

The index for *furniture, furnishings and supplies* is made up from information collected on the clothing questionnaire, together with data secured from a variety of sources in New York City. For household linens, draperies and other cottons, the average percentage of change within the last four-month investigation period, in the price of the five types of cotton yard goods for which prices are secured, is used. This is weighted 3 in a total of 10. For other items in this group, retail stores to which clothing questionnaires are sent, and which handle household furnishings, are asked to give "a general estimate of the change in retail prices of a fair grade at moderate cost" between specified dates. These are weighted in the total of 10 as follows: furniture, 2; brooms and brushes, china and crockery, glassware, kitchen utensils, carpets and rugs, 1 each. These are, of course, only general estimates for types of goods, but, realizing the tremendous range of goods and of prices possible for this group, it is evident that the average percentage of change from period to period, showing how much more the combined group of selected goods costs on a current date as compared with the cost of the same allowance in July, 1914, is sufficiently exact for all practical purposes. The percentage of change in cost for each of these having been obtained for the four-month period subsequent to the date of the last preceding index number, the weighted average of all is computed, and the change since July, 1914 is ascertained by applying the four-month change to the last preceding index number.

Candy prices are secured, both by mail and by personal visits, from manufacturers who also retail and from the chain stores, on popular brands of boxed goods and the so-called "penny" candy. These are easily standardizable by brands, but there are certain difficulties in reckoning comparative costs, nevertheless. For example, as costs of ingredients and labor mounted and taxes were imposed, changes were made in the weight of the contents of a given package, although the price may have changed but little; or smaller pieces were given in single package goods. When sugar had to be conserved during the war, nut fillings were substituted for cream fondants. The extent to which the war tax was absorbed by the industry also varied. A common system among the chain stores also is to run "specials" from day to day. If a given amount of satisfaction is sought, the price at which it may be purchased may vary but little; if a given brand of goods is desired, the situation is different. For all of these reasons the final estimate regarding changes in candy prices necessarily becomes one based on exact measurement of changes in the cost of standard goods, converted so far as possible to a pound basis. These cost changes are expressed as percentages of difference from one period to another and, finally, the total change since July, 1914 is computed.

For soda water and ice cream at fountains, changes in price as well as war taxes rendered exact figures almost impossible to procure, so that, while at first these items were taken into account through general estimates, they were later abandoned and only candy prices were considered to measure changes in the cost of sweets.

The measurement of *tobacco* costs, like that of the cost of candy, is complicated by numerous extraneous circumstances, such as revenue taxes and changes in quality and size of package. The cost of standard brands of cigarettes, smoking tobacco and cheap cigars has been followed through from period to period, however, by quotations secured from the chain store systems which, throughout the country, set the price for the bulk of these goods that are sold. Cut prices and "specials" are not considered, but so far as possible changes in weight and in taxes are taken into account in estimating relative cost. The average cost of a fixed allowance on the date of the current index number, ascertained by applying the estimated percentage of increase since July, 1914 to the cost allowance on that date, gives the comparable cost on the current date.

Changes in the cost of *recreation* are measured entirely by changes in the cost of attending motion picture theaters. Here again, changes in standards have been so profound that the only thing to do has been to accept them, on the ground that the type of entertainment and theater of common patronage in July, 1914 no longer exists and that when families go to the movies they must pay for the tremendous improvements that have been made for their enjoyment. Prices are secured through questionnaires to motion picture theater owners in the principal cities. In some instances, replies cover an entire state, in others, only a single theater. For this reason it is impossible to estimate exactly the population represented, but inasmuch as reports are received from all of the large cities, a number of states, and many smaller places, it is apparent that a representative coverage of the total population of the United States is probably included. Since prices of this kind of entertainment vary more in relation to the type of theater and picture than in relation to geographical location, the unweighted average of the percentages of change in the respective theaters is used to determine the average change for the country as a whole.

The allowance necessary on different dates for *reading material*, *stationery* and *telephone calls* is determined only by changes in the cost of newspapers and periodicals. These are secured from several news trade dealers who keep up to date quotations on periodicals of all kinds in all sections of the country. By comparing the newstand or street sales price on any two dates, the percentage of change in cost is found.

The cost of *medical care* is divided between a general practitioner's fees for house call and office visit on the one hand, and a few standard drugs and toilet goods and supplies on the other. In 1919, 1920, 1921, 1922 and 1924 the National Industrial Conference Board made extensive field surveys[1] of the cost of medical attendance and doctors' fees and found that for the most part percentages of increase were quite generally uniform.[2] Changes in fees on other dates have been noted in consulting representative physicians in different localities, but have been so few as to merit no inclusion in a general index.

Essential oils, standard prescriptions and proprietary medicines, as well as toilet soap, tooth paste and talcum powder are regularly priced at the largest chain-store drug systems in the country, having stores or representatives in every city. Price changes reported by them are of general application the country over.

Dues to labor organizations, lodges and other associations of a social nature were also carefully surveyed in different places from 1919 through 1922 and again in 1924, and as most of these costs are fixed nationally, the changes noted were of general application. Such checks as have been made since have revealed no significant change. As in the case of physicians' fees, there has been no need since 1922 for either an increase or decrease of allowance for this item, inasmuch as the general level of the cost of living has not again approached that at which former advances were made nor has it gone down sufficiently to warrant a decrease.

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[1] In connection with local surveys of the minimum cost of living.

[2] In many places the charge of all general practitioners is the same for comparable service; in others, each seems to have his own scale. The possibilities of change on a percentage basis are limited, however.

For *insurance* and for *contributions* to church and charity, the essential factor is that the same benefits be secured from period to period. This depends on the purchasing value of the dollar, for insurance premiums for small policy holders have changed practically not at all.[1] Therefore, in the allowance for insurance and for church, charity and gifts, such a percentage has been added each time as would tend to make possible the maintenance of the pre-war purchasing value.[2]

Food

The retail food price index number of the United States Bureau of Labor Statistics, showing changes in the cost of 43 articles in 51 cities, is used in the Conference Board's index. By linking these to the index for 22 items secured prior to 1921, which, in turn, had increased from 15 articles in 1913, a continuous series by months is available since 1913. This was not changed originally to a July, 1914 base when the National Industrial Conference Board index number of the total cost of living was constructed on less precise data than at present, and has never been changed since. This is because it was felt that for food, perhaps, more than for any other major item in the total cost of living, seasonal fluctuations in price occurred and that, prices being somewhat higher in July than a normal average for the year,[3] the latter furnished a better basis for measuring changes over a considerable period of time. Had the retail food price series been converted to a July, 1914 base, the greatest difference would have been found at the peak in July, 1920, and there would have been shown an increase of 114.7% for food prices over July, 1914, as contrasted with 119% over the average for the year 1913, which is the figure used. In the total cost of living this would have made an increase since July, 1914, of 102.3%; instead of the regular figure, 104.5%. These retail food prices are collected by mail each month and the Bureau of Labor Statistics furnishes the National Industrial Conference Board with the current index number as soon as it is completed.[1]

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[1] During the war period and immediately thereafter it was reported that more insurance was being carried than formerly, but this is a change in standard and not a change in cost.

[2] During the period of rising prices this allowance was not always completely made. Since 1920, however, the percentage allowance for increase for these items has been well above the increase in the cost of living.

[3] Prices in July, 1914 were the same as the average for 1914, but 2% higher than the average for the year 1913.

The Total Cost of Living

After the percentages of change in the cost of the large number of goods and services listed in the preceding pages have been ascertained, and have been combined so as to show the change in the cost of the five major items since July, 1914, these are combined to show the change in the budget as a whole. As previously noted, different items have a different importance. It is, therefore, necessary to give the index number for each item its corresponding importance or weight in the budget as a whole, by multiplying each index number by its respective weight, adding together the products and dividing by the sum of the weights. This method is shown in the following tabulation:

METHOD OF COMPUTING NATIONAL INDUSTRIAL CONFERENCE BOARD INDEX NUMBERS OF THE TOTAL COST OF LIVING

(July, 1914 = 100)

	(1) Weight in Budget	(2) Index Numbers, November, 1924	Col. 2 × Col. 1
Food	43.1	150	64.650
Shelter	17.7	184	32.568
Clothing	13.2	173	22.836
Fuel and light	5.6	168	9.408
Sundries	20.4	175	35.700
Weighted average of all items	100.0	..	165.162

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[1] See pp. 71, 79, of this volume for description of the method of collecting and combining current food prices.

The Monthly Index Number

The process of making up the cost of living index numbers of the National Industrial Conference Board, just described in detail, relates to the comprehensive data collected three times a year in March, July and November. In addition to these numbers, since January, 1920 the Board has also assembled information for intermediary months on a somewhat more limited basis as regards sources of information. The basic budget and the method of collecting and combining current price data are identical with those for the more comprehensive surveys.

These reports were started at a time when prices were changing very rapidly, and have always been considered in the nature of interim estimates indicative of tendencies rather than more definite measurements. As a matter of fact, however, experience with these monthly estimates indicates that for the budget as a whole the figures give a very fair measure of the *trend* in the cost of living in those months when complete reports are not available.

Until April, 1922, in order to get the figures out promptly, the prices were as of the first, rather than as of the fifteenth of the month and the retail food price index number of the United States Bureau of Labor Statistics for the fifteenth of the preceding month was used. Beginning in April, 1922, all were put on the basis of prices on the fifteenth of the month and the retail food price index number for the same date was used. The figures given in Table 5 have been corrected from the figures originally published, to include the retail food price index number for the month to which the number relates, rather than the preceding month.[1]

Summary

The tabulations on pages 63 and 64 summarize the details given in the present chapter as regards sources of information, localities covered, number of items and method of gathering and combining current price data, used in making up the National Industrial Conference Board index number of the cost of living.

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[1] For original series, see Research Report No. 49, *op. cit.*, p. 33.

TABLE 5: INDEX NUMBERS OF THE COST OF LIVING IN THE UNITED STATES ON SPECIFIED DATES SINCE JANUARY, 1920, BY SEPARATE BUDGET ITEMS[a]

(July, 1914=100)

(National Industrial Conference Board)

Date	All Items	Food	Shelter	Clothing	Fuel and Light	Sundries
1920						
January	192.0	201	143	270	149	177
February	193.1	200	145	277	149	178
April	201.3	211	150	288	151	183
May	203.3	215	151	287	155	183
June	204.3	219	151	276	161	185
August	198.0	207	158	255	169	185
September	197.6	203	159	255	178	188
October	195.2	198	159	248	183	190
December	183.5	178	166	205	200	192
1921						
January	178.6	172	166	187	200	192
February	170.3	158	166	174	198	190
April	165.9	152	171	169	179	185
May	162.6	145	171	168	178	185
June	161.4	144	171	162	178	185
August	165.1	155	169	159	179	183
September	163.9	153	169	157	179	183
October	163.7	153	169	160	179	180
December	161.6	150	169	157	179	178
1922						
January	158.0	142	169	156	178	178
February	157.7	142	169	156	177	177
April	154.8	139	165	155	174	174
May	154.9	139	165	156	174	174
June	155.4	141	165	153	174	174
August	154.5	139	165	153	181	172
September	155.6	140	165	155	187	172
October	157.1	143	165	157	187	172
December	158.9	147	167	156	187	171
1923						
January	158.1	144	167	160	187	171
February	157.5	142	167	162	187	171
April	159.1	143	170	167	180	173
May	160.3	143	172	174	178	173
June	160.1	144	172	169	178	173
August	161.6	146	175	171	176	173
September	163.4	149	175	175	176	173
October	164.1	150	175	176	178	173
December	165.0	150	180	175	176	174
1924						
January	164.6	149	180	176	175	174
February	163.9	147	180	177	175	174
April	161.8	141	185	177	168	174
May	161.4	141	185	176	165	174
June	161.7	142	185	174	165	174
August	162.8	144	186	176	166	173
September	163.7	147	185	174	166	173
October	165.0	149	185	177	167	173
December	166.1	152	184	173	169	175
1925						
January	167.1	154	184	174	169	175
February	165.3	151	183	172	169	175

[a] The index numbers for the total cost of living from January, 1920, through February, 1922, are different from the series hitherto published, in that the food price figure for the fifteenth of the current month has been substituted for the figure for the fifteenth of the preceding month, used in the original series. Beginning in April, 1922, the retail food price figure has always been for the fifteenth of the current month.

SUMMARY, METHOD OF CONSTRUCTING NATIONAL INDUSTRIAL CONFERENCE BOARD INDEX NUMBERS OF THE COST OF LIVING IN THE UNITED STATES

	Food [a]	Shelter	Clothing	Fuel and Light	Sundries
Number of articles......	1913–1920, 22. 1921–date, 43.	General estimate.	29	5	11
Localities covered......	51	All cities 50,000 or over; some smaller places; average, 167.	Varying, average, 76.	*Coal:* Varying, average, 59. *Light:* All cities 50,000 or over; some smaller places; average, 167.	*Carfare:* Average, 167. *Furniture, etc.:* Some reports same as clothing, others, general estimates. *Candy:* National distribution. *Tobacco:* National distribution. *Recreation:* Varying, general. *Reading Material:* National distribution. *Medical Care:* Varying, general. *Dues, insurance, contributions:* Percentage estimate based on index number of cost of living.
Sources of information....	Retailers serving working class trade; 15 to 25 quotations.	Agents and others familiar with rents of low and medium price housing; 1 to 10 reports.	Retailers selling inexpensive grade of merchandise; 1 to 10 reports.	*Coal:* Retail dealers; 1 to 5 reports. *Light:* Public service commissions, city mayors, real estate agents; 1 to 10 reports.	Retail stores, national distributors, theatre owners, physicians, real estate agents; varying number of reports.
Method of gathering information....	Questionnaire.	Questionnaire.	Questionnaire.	Questionnaire.	Questionnaire and special agents.

[a] The retail food price series is constructed by the United States Bureau of Labor Statistics.

Summary, Method of Constructing National Industrial Conference Board Index Numbers of the Cost of Living in the United States—(*Continued*)

	Food	Shelter	Clothing	Fuel and Light	Sundries
Method of computing change in cost of each major item...	Average price of each article multiplied by unit weight, products added, aggregates compared on percentage basis from month to month; change within a month applied to index number for last preceding month.	Percentage change in each report averaged; these averaged for each city; cities grouped by population and average rent change for each population group found; these multiplied by respective population weights, products added, divided by sum of weights; this figure applied to last preceding index number.	Average price of each article on one date, compared with average price on preceding date on percentage basis; these changes applied to money allowance for respective articles in trial budgets. Aggregate cost of budgets compared from one period to another on percentage basis.	*Coal:* All quotations for each kind of coal averaged; percentage difference between this and last preceding average computed; applied to last preceding index number. New index numbers for two kinds of anthracite averaged; index number for anthracite averaged with index number for bituminous coal. *Light:* Percentage of change in rates, extra charges, discounts from one period to another ascertained for each city; cities grouped by population and average change for each population group found; these multiplied by respective population weights, products added, divided by sum of weights; this percentage applied to last preceding index number. Gas weighted two, electricity one, in combined number. *Combined:* Fuel index weighted two, light one; weighted average gives index for fuel and light.	For each item, average percentage of change in cost between two dates is found and applied to money cost on last preceding date to get money cost on current date; sum of these compared with total cost of same items in 1914 gives current index number.

CHAPTER III

INDEX NUMBERS OF THE COST OF LIVING, BY THE UNITED STATES BUREAU OF LABOR STATISTICS

ALTHOUGH the United States Bureau of Labor Statistics, in conjunction with the Shipbuilding Wage Adjustment Board of the Emergency Fleet Corporation, collected budgets of families of shipyard workers and others living in the same localities in 1917 and 1918, and at the same time collected current prices and prices at earlier dates in order to measure how much the cost of living had increased since 1914, these were not combined into an index for the country as a whole until June, 1919. In 1918 and 1919, however, the Bureau, in cooperation with the National War Labor Board, made investigations of family incomes and expenditures and also retail prices in 92 localities, including 18 of the shipbuilding centers. Later, agents were again sent to each of 31 of these cities to collect prices as of June, 1919, December, 1919 and June, 1920. The percentages of change in prices between these respective dates were computed and linked on to an index computed by combining figures for the 18 shipbuilding centers.[1] In December, 1920, Washington was added to the list of cities, and from that date, 32 representative industrial centers in different sections of the country have furnished information for the Bureau's cost-of-living index number. These cities had a combined population of 21,071,011 in 1920.[2] Since 1922, numbers have been published regularly four times a year.

These figures are constructed on three bases: first, in 19 cities current costs are computed as percentages of average costs in December, 1914;[1] second, in 13 cities costs in December, 1917, from the base;[2] and third, a series for the country as a whole is made by combining the first two and relating them to average prices in 1913 by estimating the increase from 1913 to December, 1914.[3] In the present analysis, the series for the separate cities will not be discussed in detail except as may be necessary to secure a clear picture of the construction of the index numbers for the country as a whole. They are, however, included in Appendix A to the present report, and it should be understood that the index numbers for the separate cities are a more important part of the Bureau of Labor Statistics series than the index for the country as a whole, in that the series for the latter is merely a combination of the series for the separate cities.[4]

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[1] *Monthly Labor Review*, October, 1920, p. 65.

[2] In reality 33 cities are included, inasmuch as Oakland and San Francisco are combined. For food, as will appear later, reports from 51 cities are used. For this item, the total population representation was 24,466,309.

The Bureau of Labor Statistics index number series of the cost of living for the country as a whole had its beginning in an estimate published in the *Monthly Labor Review* of October, 1919. For this, the author had comparable data from the eighteen shipbuilding centers running back to December, 1914, and usable data from thirteen other important cities, as well as from sixty-six less important places from December, 1917. From these he concluded that, up to and including 1916, the cost of living in the shipbuilding centers and in the non-shipbuilding centers had risen at approximately the same rate, since excessive activity in the former did not start until 1917; he estimated that between 1917 and 1919 the cost of living in the cities outside the shipbuilding centers advanced 12% less rapidly than in the shipbuilding centers. On the basis of retail food price changes and wholesale commodity indexes, it was estimated that a liberal allowance for the change in the cost of living level between July, 1914 and December, 1914 was 2%. Combining all of these data, the following table resulted:[5]

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[1] Baltimore, Boston, Buffalo, Chicago, Cleveland, Detroit, Houston, Jacksonville, Los Angeles, Mobile, New York, Norfolk, Philadelphia, Portland, Me., Portland, Ore., San Francisco and Oakland, Savannah, Seattle, Washington.

[2] Atlanta, Birmingham, Cincinnati, Denver, Indianapolis, Kansas City, Mo., Memphis, Minneapolis, New Orleans, Pittsburgh, Richmond, St. Louis, Scranton.

[3] *Monthly Labor Review*, January, 1920, p. 97.

[4] Except that for food, 51 cities are included, instead of 32 where the complete cost of living survey is made.

[5] *Monthly Labor Review*, October, 1919, pp. 4, 7.

INDEX NUMBERS OF COST OF LIVING IN SHIPBUILDING CENTERS, AND IN OTHER CITIES AND TOWNS, AND FOR THE UNITED STATES

Month and Year	Eighteen shipbuilding centers (base changed to July, 1914)[a]	Other cities and towns (on assumption of prices therein having increased since 1916, 12% less rapidly than in shipbuilding centers)	United States (a mean between columns 1 and 2)
July, 1914	100.0	100.0	100.0
December, 1914	102.0	102.0	102.0
December, 1915	102.5	102.5	102.5
December, 1916	117.1	117.1	117.1
December, 1917	143.9	138.6	141.2
December, 1918	176.0	166.9	171.5
June, 1919	180.0	170.4	175.2

[a] By assuming a 2% increase between July, 1914 and December, 1914 as a liberal estimate, based on retail food prices and wholesale commodity indexes.

From the figures in the last column interpolations were then made for mid-year points. The next month, in order that the figures might be used in connection with some wage indexes calculated on a 1913 base, a further estimate was made of changes in the cost of living between 1913 and July, 1914. The series as thus constructed, showing changes in the cost of living for the country as a whole, was as follows:[1]

Date	Index number
Average for 1913	100
July, 1914	101
December, 1914	103
June, 1915	103
December, 1915	104
June, 1916	110
December, 1916	118
June, 1917	129
December, 1917	142
June, 1918	158
December, 1918	174
June, 1919	177

In June, 1920, estimates were made for the changes in cost of the separate items on the basis of which the aggregate change had already been computed,[2] and since then the series has been complete. The series for the separate items and

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[1] *Monthly Labor Review*, November, 1919, p. 193.

[2] Note in the tabulation above that the original increase for December, 1915, 4% was at first refined to 3.6% (*Monthly Labor Review*, October, 1920, p. 65); in 1921, however, it was changed to 5.1%, the actual weighted increase. The figure in October, 1920, was not mathematically correct.

TABLE 6: CHANGES IN THE COST OF LIVING IN THE

(United States Bureau

Item of expenditure	Per Cent of Increase										
	Dec., 1914	Dec., 1915	Dec., 1916	Dec., 1917	Dec., 1918	June, 1919	Dec., 1919	June, 1920	Dec., 1920	May, 1921	Sept., 1921
Food	5.0	5.0	26.0	57.0	87.0	84.0	97.0	119.0	78.0	44.7	53.1
Clothing	1.0	4.7	20.0	49.1	105.3	114.5	108.7	187.5	158.5	122.6	92.1
Housing	[a]	1.5	2.3	0.1	9.2	14.2	25.3	34.9	51.1	59.0	60.0
Fuel and light	1.0	1.0	8.4	24.1	47.9	45.0	56.8	71.9	94.9	81.6	80.7
House-furnishing goods[b]	4.0	10.6	27.8	50.6	113.6	125.1	163.5	192.7	185.4	147.7	124.7
Miscellaneous	3.0	7.4	13.3	40.5	65.8	73.2	90.2	101.4	108.2	108.8	107.8
All items	3.0	5.1	18.3	42.4	74.4	77.3	99.3	116.5	100.4	80.4	77.3
Electricity[c]	3.7	6.2	8.6	11.1	6.2	6.2	7.4	7.4	4.9	4.9	4.9

[a] No change.

[b] In some statements by the Bureau of Labor Statistics this item is called "Furniture

[c] This line shows the per cent of *decrease* in the price of electricity on the dates named, averages of consumption at the various rates charged.

for all combined, as published regularly by the Bureau of Labor Statistics in the *Monthly Labor Review*, is reproduced in Table 6.[1] The method of constructing this series is described in succeeding sections of the present volume.

BASIC BUDGET

Although these figures are designed to measure changes in the cost of living since 1913, the standard of living on which they are based is that of a later period.[2] From 1913 to 1917, when the series was constructed from prices in the 18 shipbuilding centers, the budget was based on studies made in these cities in 1917 and 1918; from that time on, budgets collected in 92 localities in 1918 and 1919 were used.[3] Thus the index numbers of the United States Bureau of Labor Statistics measure changes in the cost of maintaining

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[1] The Bureau of Labor Statistics prints its figures showing changes in the cost of living as percentages of increase above 1913, or whatever other date may be the base, not as index numbers, and they have not been changed to an index number basis in this table.

[2] See Chapter V of this volume for analysis of the effect of this on the index number.

[3] A noteworthy circumstance is that for the original 18 cities in the series the standard through 1917 was a 1917 budget; after that, the new standard was adopted. If the present budget weightings for the separate items are multiplied by the increases in cost of these respective items, the increase in the cost of living is not the same as the figure given in the present series. For example, in New York and Philadelphia the difference was about one point in December, 1917.

UNITED STATES, 1913 TO DECEMBER, 1924, INCLUSIVE

of Labor Statistics)

from 1913 (Average) to—												
Dec., 1921	Mar., 1922	June, 1922	Sept., 1922	Dec., 1922	Mar., 1923	June, 1923	Sept., 1923	Dec., 1923	Mar., 1924	June, 1924	Sept., 1924	Dec., 1924
49.9	38.7	41.0	39.8	46.6	42.0	44.3	49.3	50.3	43.7	42.4	46.8	51.5
84.4	75.5	72.3	71.3	71.5	74.4	74.9	76.5	76.3	75.8	74.2	72.3	71.3
61.4	60.9	60.9	61.1	61.9	62.4	63.4	64.4	66.5	67.0	68.0	68.0	68.2
81.1	75.8	74.2	83.6	86.4	86.2	80.6	81.3	84.0	82.2	77.3	79.1	80.5
118.0	106.2	102.9	102.9	108.2	117.4	122.2	122.4	122.4	121.3	116.0	114.9	116.0
106.8	103.3	101.5	101.1	100.5	100.3	100.3	101.1	101.7	101.1	101.1	101.1	101.7
74.3	66.9	66.6	66.3	69.5	68.8	69.7	72.1	73.2	70.4	69.1	70.6	72.5
4.9	4.9	6.2	6.2	7.4	7.4	7.4	8.6	8.6	8.6	8.6	8.6	8.6

and house furnishings.”

as compared with the price in December, 1913. These figures are based on the weighted

unchanged a war-time standard of living rather than a prewar standard. The basic budget investigations all covered wage earners and salaried persons of small means.[1] Every item of major importance in the budgets of these families is represented in the index numbers by articles selected so as to indicate the trend of all; an absolutely complete budget is not priced each quarter. Foodstuffs, for example, represent somewhat more than two-thirds of the total food consumed by an average family;[2] fuel and light includes coal, wood, gas, electricity and kerosene; housing includes rent; clothing, furniture, furnishings, and miscellaneous items are not complete but are represented by generous samples. To the extent that the samples are properly chosen and retain their identity from one period to another, the results should be as accurate as any reasonably possible system. An absolutely complete budget comparison from period to period is an almost impossible refinement of accuracy and probably defeats its own ends by its cost and clumsiness.

The basic investigation by the United States Bureau of Labor Statistics, from which present consumption weights were derived, was made in 1918 and 1919.[1] Expenditures and quantity consumption were studied among 12,096 white families[2] in 92 towns in 42 states. These towns represented all types of industrial activity in all parts of the country.[3] Families to be scheduled were required to meet the following qualifications:

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[1] This should not be confused with the Bureau’s quantity and cost budget for a standard of health and decency. For the price index series, no standard of living is specified beyond “wage earners.”

[2] The 43 articles listed since 1921 represented approximately 70%; the 15 articles originally priced in 1913 represented 64%.

"1. The family must be that of a wage earner or salaried worker, but not of a person in business for himself. The families taken should represent proportionally the wage earners and the low or medium salaried families of the locality. 2. The family must have as a minimum a husband and wife and at least one child who is not a boarder or lodger. 3. The family must have kept house in the locality for the entire year covered. 4. At least 75% of the family income must come from the principal breadwinner or others who contribute all earnings to the family fund. 5. All items of income and expenditure of members other than those living as lodgers must be obtainable. 6. The family may not have boarders nor over three lodgers, either outsiders or children living as such. 7. The family must have no sub-rental other than furnished rooms for lodgers. 8. Slum or charity families or non-English-speaking families who have been less than five years in the United States should not be taken."[4] The average size of family was 4.9 persons[5] or 3.32 equivalent adult males.[6]

Schedules containing 474 questions were filled in by agents of the Bureau through interviewing the families.[7]

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[1] United States, Bureau of Labor Statistics, "Cost of Living in the United States," Bulletin 357, Washington, 1924; *ibid.*, "Methods of Procuring and Computing Statistical Information of the Bureau of Labor Statistics," Bulletin No. 326, Washington, 1923, pp. 6–22. See also National Industrial Conference Board, Research Report No. 41, *op. cit.*, pp. 10–12; 90–97.

[2] Budgets were also collected from 741 colored families, but they have not been used in weighting subsequently collected prices.

[3] These are listed in Bulletin No. 357, *op. cit.*, pp. 2–3; also in Research Report No. 41, *op. cit.*, pp. 90–97.

[4] Bulletin No. 357, *op. cit.*, p. 2. Requirement 6 was construed not to refer to nor include relatives, servants, nurses, etc., temporarily in the home, who were furnished board free.

[5] The size of the groups varied with the income. *Ibid.*, p. 5.

[6] "Equivalent adult males" is the measure used to reduce all of the members of a family of different sex and age to a common food-consumption basis, using that of the adult male as one.

[7] Bulletin No. 326, *op. cit.*, pp. 6–13.

Thus a minute description of consumption habits and current expenditures was obtained. From an analysis of these, the conclusion was reached that among wage earners and low and medium salaried families, annual expenditures were distributed as follows: for food, 38.2%; housing, 13.4%; clothing, 16.6%; fuel and light, 5.3%; furniture and furnishings, 5.1%; miscellaneous, 21.3%.[1] These differed, of course, from place to place and with the size of the family and the amount of the income; but for all families, everywhere, it was found that out of every $1,000 spent, an average of $382 went for food; $134 for housing; $166 for clothing; $53 for fuel and light; $51 for furniture and furnishings; $213 for miscellaneous items.

Although the basic budget on which the Bureau has estimated increases in the cost of living since 1913 is, to all intents and purposes, based on a study of expenditures in 1918 and 1919, this is not true of all items, and although the trend line produced by the weights thus constructed is not out of line with other trend lines covering the same period,[2] it is a matter of interest that these differences occur.

Food

For example, since January, 1921, the retail food price series of the United States Bureau of Labor Statistics has been based on average prices of 43 articles obtained in 51 cities, and weighted according to consumption in those cities in 1918 and 1919. Prior to that date, however, a varying number of articles had been used, beginning with 15 in 1913 and numbering 22 from 1915 through 1920. The consumption weights for the earlier series were based on an investigation made in 1900–1902. Inasmuch as these were two distinct series, linked together in 1921, their make-up will be discussed separately.

In 1900–1902 the United States Bureau of Labor Statistics[3] made an exhaustive study of the cost of living among workingmen's families and of retail prices in the United States.[1] The annual expenditures for all the goods and services entering into the cost of living were ascertained from 2,567 families.[2] During the next succeeding years retail food prices were collected in the principal cities of the original investigation and in a few others. Prices of the 30 articles thus secured were weighted according to annual expenditure[3] for the articles by the 2,567 families in 1901; and a percentage of increase for all combined was worked out, using average prices in the years from 1890 to 1899 as the base. This series was discontinued after 1907. In 1911, however, a new series was worked out, based on 15 articles of food, weighted according to their consumption in 1901.[4] To these were added three articles in 1914 and four in 1915.[5] The weights were as follows, for the country as a whole:[6]

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[1] Bulletin No. 357, *op. cit.*, p. 466.

[2] The greater increase shown by the figures of the Bureau of Labor Statistics than by other indexes of the cost of living is apparently not due to the changes in weighting but to the weightings themselves, as well as to other factors. See Chapter V of this volume.

[3] Then the United States Bureau of Labor.

	Weight
Sirloin steak (pound)	70
Round steak (pound)	70
Rib roast (pound)	70
Chuck roast (pound)	70
Plate beef (pound)	70
Pork chops (pound)	114
Bacon (pound)	55
Ham (pound)	55
Lard (pound)	84
Hens (pound)	68
Bread (pound)	253[a] 225[b]
Flour (pound)	454
Cornmeal (pound)	227
Eggs (dozen)	85
Butter (pound)	117
Potatoes (pound)	882
Sugar (pound)	269
Milk (quart)	355
Cheese (pound)	16
Rice (pound)	25
Coffee (pound)	47
Tea (pound)	11

[a] Weightings used with 16 ounces of dough.

[b] Weightings used with prices on one pound baked weight.

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[1] Eighteenth Annual Report of the Commissioner of Labor, *op. cit.*

[2] *Ibid.*, pp. 647 ff.

[3] Consumption and expenditure weights are given in the report. *Ibid.*, pp. 648, 650.

[4] United States, Bureau of Labor Statistics, "Retail Prices, 1890 to 1911," Bulletin No. 105, Washington, 1912.

[5] *Ibid.*, "Retail Prices, 1907 to December, 1916," Bulletin No. 228, Washington, 1917, p. 6.

[6] *Monthly Labor Review*, November, 1918, p. 95.

Thus, average consumption of approximately two-thirds of the total food used by working class families in 1901 served as weights in making up the retail price index from 1913 through 1920. In the meantime, however, the Bureau of Labor Statistics had made another survey of the cost of living in the United States in 1918 and 1919. The qualifications established for scheduling[1] differed considerably from the 2,567 unselected families whose expenditures were studied in 1901,[2] but the consumption weights developed from a study of nearly 9,000 of these families in 51 cities were sufficiently comparable with the earlier weights to make it possible to link the new series on to the old. These new food weights are as follows:[3]

	Weight
Sirloin steak (pound)	32
Round steak (pound)	32
Rib roast (pound)	31
Chuck roast (pound)	31
Plate beef (pound)	23
Pork chops (pound)	36
Bacon (pound)	17
Ham (pound)	22
Lamb (pound)	8
Hens (pound)	23
Salmon, canned (pound)	9
Milk, fresh (quart)	337
Milk, evaporated (pound)	77
Butter (pound)	66
Oleomargarine (pound)	16
Nut margarine (pound)	6
Cheese (pound)	12
Lard (pound)	34
Crisco (pound)	9
Eggs, strictly fresh (dozen)	61
Bread (pound)	531
Flour (pound)	264
Cornmeal (pound)	54
Rolled oats (pound)	41
Corn flakes (pound)	7
Cream of Wheat (pound)	7
Macaroni (pound)	23
Rice (pound)	35
Beans, Navy (pound)	22
Potatoes (pound)	704
Onions (pound)	66
Cabbage (pound)	65
Beans, baked (pound)	7
Corn, canned (pound)	10
Peas, canned (pound)	10

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[1] See p. 71 of this report.

[2] Eighteenth Annual Report of the Commissioner of Labor, *op. cit.*, pp. 15, 16, 75.

[3] *Monthly Labor Review*, March, 1921, p. 26.

	Weight
Tomatoes, canned (pound)	16
Sugar (pound)	147
Tea (pound)	8
Coffee (pound)	40
Prunes (pound)	11
Raisins (pound)	9
Bananas (dozen)[a]	11
Oranges (dozen)	7

[a] In cities where most of the sales of bananas are by the pound rather than by the dozen, the above weighting is multiplied by three before being applied to the price per pound.

As a budget on which to base changes in the price of foodstuffs this is well balanced, in that it includes all of the important kinds of foods, but it is not truly typical in that it does not include the seasonal fruits and vegetables. The inclusion of these in an index made up each month is obviously out of the question because of absence of standards and the constantly recurring change in the goods in the market.[1] The measuring unit for price changes afforded without them is undoubtedly sufficiently accurate, but it is true that the season when fresh fruits and vegetables are most reasonable in price and are extensively used by most families, is the season when the retail food price index number in normal years shows an advance.[2]

Housing

The standard of housing used by the Bureau of Labor Statistics in making up its cost of living index number relates to such accommodations as "are occupied by representative working men's families."[3] There are no other specifications as to standards.

Clothing

The basic clothing budget is designed as a sample of total clothing consumption; that is, it does not represent the average use of the various articles listed in the clothing budget adopted to determine expenditures in 1918 and 1919,[4] but is made up of 71 separate items, for four persons, a man, woman, boy of twelve, and girl of six. The quantity weighting for each of these items corresponds to their average consumption by 12,096 families in 1918 and 1919. The same weights are used for the separate cities as for the country as a whole. Originally, many more items were included, but these have been eliminated in favor of fewer representative samples, which are here given.

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[1] In the index number series constructed in Milan the budget is changed each month to include the foods in season.

[2] See Table 22 and Table 23.

[3] Bulletin 326, *op. cit.*, p. 15.

[4] That schedule listed 142 clothing items. Bulletin 326, *op. cit.*, pp. 9–11.

NAMES AND NUMBER OR QUANTITY OF ARTICLES USED IN WEIGHTING CHANGES IN THE COST OF CLOTHING[a]

CLOTHING, FEMALE

	Quantity weightings
Summer prices:	
Skirts, cotton, wash	½
Waists, silk	½
Unionsuits	2
Drawers, muslin, 6 years	5
Petticoats, muslin	1
Petticoats, muslin, 6 years	2
Nightgowns, muslin, 6 years	1
Shoes, low	1
Shoes, low, 6 years	2
Winter prices:	
Suits, wool	½
Coats, wool	⅓
Coats, wool, 6 years	½
Dresses, wool	½
Unionsuits	1
Unionsuits, 6 years	2
Petticoats, not silk	1
Petticoats, 6 years	1
Nightgowns, 6 years	1
Shoes, high	1
Shoes, high, 6 years	3
Year round prices:	
House dresses	2
Kimonas	½
Combinations, muslin	2
Underwaists, 6 years	5
Nightgowns, muslin	2
Corset covers	2
Brassieres	2
Corsets	2
Stockings, cotton	8
Stockings, cotton, 6 years	12
Rubbers	1
Rubbers, 6 years	1
Half soles and heels (sewed)	1
Rubber heels	3
Apron, gingham (1)	2 yards
Apron, gingham (1 apron for 6-year girl)	2½ yards
Waists, voile (3)	6 yards
Dresses, voile, organdie, gingham (2)	10 yards
Dresses, 6 years, gingham (6)	18 yards
Dress, 6 years, serge (½)	¾ yard

[a] Unless age is specified prices are for adults.

Names and Number or Quantity of Articles Used in Weighting Changes in the Cost of Clothing[a]

Clothing, Male

	Quantity weightings
Summer prices:	
Hats, straw	1
Suits	⅓
Trousers, cotton, 12 years	2
Unionsuits	3
Unionsuits, 12 years	3
Winter prices:	
Suits	⅓
Trousers, wool, 12 years	1
Overcoats	¼
Overcoats or mackinaws, 12 years	½
Unionsuits	2
Unionsuits, 12 years	2
Year round prices:	
Hats, felt	1
Caps	1
Caps, 12 years	2
Suits, wool, 12 years	1
Overalls or work trousers	2
Shirts, cotton	6
Shirts, cotton, 12 years	5
Nightshirts	2
Nightshirts, 12 years	2
Socks, cotton	12
Stockings, cotton, 12 years	12
Shoes, high	2½
Shoes, high, 12 years	5
Rubbers	½
Collars	6
Neckties	2
Neckties, 12 years	2
Whole soles and heels (sewed)	1
Half soles and heels (sewed)	1
Half soles and heels (sewed), 12 years	5

[a] Unless age is specified prices are for adults.

Fuel and Light

The basis for estimates of changes in the cost of fuel and light are anthracite and bituminous coal, wood, gas, electricity and kerosene. The consumption weights used in each city are derived from the quantity of each item consumed in that city in 1918 and 1919; for the country as a whole, the average consumption of all is used.

Furniture and House Furnishings[1]

For this major item, the articles chosen as a sample by which to measure price changes, together with the quantities of each used to weight the price, are given below. This list is a simplification of the original sample used for this item, but there has been no comment that it is not representative.

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[1] In some statements by the Bureau of Labor Statistics, this item is called "House-furnishing goods." See, for example, Table 6 and Appendix A-1 and Appendix A-2 of this volume.

FURNITURE AND FURNISHINGS	Quantity weighting
Carpets, rugs, wool (yards)	3.9
Matting, rugs, grass (square yards)	.5
Linoleum (square yards)	1.8
Chairs, living room and dining (each)	.8
Tables, library, dining, kitchen (each)	2
Couches, sanitary or bed (each)	.1
Dressers and chiffoniers (each)	.1
Buffets (each)	.1
Bedsteads (each)	.2
Bed-springs (each)	.2
Mattresses (each)	.3
Baby carriages (each)	.2
Pillow cases (each)	1.9
Sheets (each)	1.3
Tablecloths (each)	.3
Towels (each)	2.8
Blankets, cotton and wool (each)	.5
Comforts (each)	.2
Cook stoves and heating stoves (each)	.3
Brooms (each)	3.0
Sewing machines (each)	.1
Refrigerators (each)	.1

Miscellaneous Items

Miscellaneous items made up 21.3% of the family budget in 1918–1919, which forms the basis of weights used for the Bureau of Labor Statistics index numbers. The separate goods and services and the relative importance attached to each is shown in the tabulation below:

MISCELLANEOUS ITEMS

		Quantity weighting
Street car:	Regular fare, adult	550
Movies:	First floor, week night, adult	70
Newspaper:	Daily on street	313
	Sunday on street	52
Doctor:	Office visit, usual charge	7
	House visit, usual charge	7
	Obstetrical case, usual charge	.1
Medicine:	Calomel tablets, ¼-grain	4 dozen
	Aspirin tablets, 5-grain	4 dozen
	Castor oil	8 ounce
	Quinine pills	4 dozen
	Standard prescription, liquid, 2 oz.	3 prescriptions
	Standard prescription, liquid, 4 oz.	3 prescriptions
	Standard prescription, capsule or pill, 3-grain mixture, 1 doz.	8 prescriptions
Hospital:	Pay ward	.2 week
Dentist:	Filling, usual charge	4
	Crown, usual charge	.5
	Plate, full upper, usual charge	.05

Miscellaneous Items—(*Continued*)

		Quantity weighting	
Spectacles:	Gold-filled rims, flat spherical lens	.3	
	Single separate lens	.5	
Laundry:	Men's stiff collars	104	
	Men's shirts, soft cuffs attached	52	
	Sheets	104	or
	Turkish towels	104	
	Flat work	208 pounds	
Cleaning supplies:	Soap, small	30 cakes	
	Laundry soap (6 to 12 oz.)	60 cakes	
	Soap powder (8 to 16 oz.)	12 packages	
	Cleaning powder (14 to 18 oz.)	24 packages	
Barber:	Shave	25	
	Hair cut	10	
Toilet articles and preparations:	Tooth brush	3	
	Toilet soap	30 cakes	
	Shaving stick or cream	2 sticks or tubes	
	Tooth powder or paste	6 cans or tubes	
	Talcum powder	8 cans	
	Vaseline (1 to 2 oz.)	1 jar	
Telephone:	Residence	½	
Tobacco:	Cigar	110	
	Cigarettes	60 packages	
	Cigarette tobacco (1 to 2 oz.)	30 packages	
	Pipe tobacco (1 to 2 oz.)	20 packages	
	Plug tobacco (1 to 3½ oz.)	20 cuts	

METHODS OF COLLECTING AND COMBINING CURRENT PRICES

The United States Bureau of Labor Statistics collects its retail price data partly by mail and partly by special agents. When, in 1920, the regular computation of index numbers of the cost of living was begun, there were already at hand sources of information of several years' standing regarding certain major items in the family budget. Thus, a retail food price series runs back to 1890; coal prices and gas rates had been collected regularly since 1907. It was necessary, therefore, to add only such other price data as were required to round out an adequate measure of the cost of living. This was done by providing for the collection of prices of clothing, furniture and house furnishings, miscellaneous items and house rents, also wood and electricity, in addition to the quotations currently assembled for food, coal and gas. The latter were all being collected by questionnaire by mail and the practice was continued; prices of the new items, except wood and electricity, are all collected by special agents, in 32 cities selected as representative of conditions in different parts of the country and among different types of localities.

Prices Collected by Questionnaire

Food: Retail food prices are supplied by mail as of the fifteenth of each month by dealers with whom the Bureau of Labor Statistics has made this cooperative arrangement. Thirty-nine cities furnished prices in 1913; more were added for a number of years until, by 1920, 51 were included. For the most part these are the largest industrial cities in the country.[1] In order, however, properly to represent certain sections or significant industrial types, cities of smaller size, important in their own part of the country but not ranking numerically at the top, are included. The population covered is slightly less than one-quarter of the country as a whole.

In the larger cities, an effort is made to secure 25 quotations; in the smaller, 15 are sought for most of the items. For a few, such as bread and milk, prices of which are more uniform, fewer quotations are secured. Prices are obtained from neighborhood stores, downtown stores, department stores and chain stores, some of which deliver goods or give credit, and some do not.[2] These stores are personally chosen by agents of the Bureau, and as for one reason or another replacements must be made, this is done by agents of the Bureau so as to maintain the continuity of representation.

At the beginning of each year the Bureau sends to each of these cooperators a book of twelve questionnaires in duplicate, together with instructions and franked envelopes. Each cooperating dealer is expected to fill out the questionnaire on or about the fifteenth of each month, giving current quotations on the same kind and grade of article for which he furnished prices the month before. This he ascertains by consulting the carbon copy which he has kept in his book;[3] certain items are definitely specified by trade name. This report is sent to Washington in the franked envelope. If dealers fail to report within a reasonable time, telegrams are sent them. Persistent failure to file reports is investigated by an agent of the Bureau and, if necessary, another dealer is substituted. The percentage of dealers and the names of the cities having perfect reports are given considerable publicity,[1] and in this way merchants are spurred to do their part, although in accordance with the policy of the Bureau names or other means of identification are not published.

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[1] See pp. 168 ff. of this volume for list of cities.

[2] United States Bureau of Labor Statistics, "Retail Prices, 1913 to December, 1922," Bulletin No. 334, Washington, 1924, p. 57.

[3] Instructions read: "It is absolutely essential to the value of the record that you quote the price of *exactly the same grade and brand of each article* from month to month. Should it be necessary to change the brand or quality of any article, be sure to explain the change in a note."

Three sets of questionnaire books are sent out. The largest and most complete lists all of the 43 articles making up the index, except fresh milk and bread; another calls for prices of fresh milk, butter, eggs and hens; the third is for bread.[2] When the questionnaires, properly filled in, are returned to the Bureau of Labor Statistics in Washington, they are carefully inspected for inconsistencies and then are edited for machine tabulating.[3] The use of a mechanical system, which is well adapted to a simple questionnaire such as is used in collecting retail food prices, expedites the work and permits a public press release a month after the date for which the price data are submitted. The retail food price index for March, June, September and December is combined with the index numbers for other items in the cost of living on those respective dates to obtain the change in the cost of living as a whole.

For each of the 22 articles included in the retail food price index from 1913[4] to December, 1920, and of the 43 articles included since January, 1921, the prices furnished by all of the merchants in all of the cities, reduced to a comparable unit basis,[5] are combined in a simple average.[6] This average price per unit of each article for the country as a whole is then multiplied by the number of units consumed by the average family as determined in the investigation of the cost of living in 1918.[1] Having found the average cost to the average family of the total amount of each article consumed, these costs are added together to find the average cost of the family's total food budget.[2] A relation of these costs from month to month to a common base period is obtained by expressing each as a percentage of the average cost in the year 1913.

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[1] The names of cities and percentages "perfect" are published in the newspapers and in the *Monthly Labor Review.*

[2] The difference in the weight of bread before and after baking, the fact that this does not vary by a standard formula, and that customs differ regarding the amount sold for a given price has made a rather elaborate schedule necessary, in order that the price of all bread may be reduced to a common basis.

[3] Reduction to a uniform basis is necessary for some items, as, for example, a No. 2 can contains 20 ounces; the unit of measurement of canned goods on which comparative prices are figured is the pound.

[4] Prices for all twenty-two articles, although not originally collected in 1913, were later run back to this date.

[5] Where bananas, for example, are sold by the dozen, rather than the pound, a readjustment in price has to be made to put them on a pound basis.

[6] The same procedure is followed for each city separately. *Monthly Labor Review,* March, 1921, p. 25.

In making the change in 1921 from an index based on 22 articles to one based on 43 articles, the procedure was to ascertain the change in the average cost of the 43 articles weighted and combined in December, 1920 and in January, 1921, and apply this percentage to the index number for December, 1920, based on 22 articles. In other words, it was assumed that from 1913 through 1920 the 43 articles would have shown the same percentage of change in cost as was shown by the 22 articles.[3] While this preserved the continuity of the number with relatively little break, the tendency of the new weighting, applied to 43 articles as contrasted with the 1901 weightings applied to 22 articles, was to minimize slightly the advance in food prices[4] and to intensify somewhat the seasonal fluctuations.[5] The procedure just described relates to the index number for the country as a whole, based on prices in 51 cities combined. For each of these cities an index is also worked out separately.

Fuel and Light: Prices for coal and rates for gas are, like prices of food, secured in 51 cities, and index numbers based on these quotations are computed regularly for the country as a whole. Unlike that for food, however, these series are not combined intact with other data in preparing the cost of living series, but only prices collected in the 32 cities which make up the backbone of the series are used. Quotations for wood, electricity and kerosene are also secured in these same 32 cities. All of these, with the exception of kerosene prices, are secured on forms sent out by mail four times a year by the Bureau of Labor Statistics.[1] From 10 to 15 firms report in each of the 32 cities.[2]

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[1] These are listed on pp. 73, 74, of the present volume.

[2] The 43 items are only representative of the total budget, not inclusive. The basic questionnaire listed 142 items; the number from which 43 were selected as a sample totalled 128. Bulletin 326, *op. cit.*, pp. 22–23.

[3] Bulletin No. 334, *op. cit.*, p. 3. The same procedure was followed between 1913 and 1920 when more articles or more cities were added to the index; that is, the percentage of change in the total cost between the date when the new quotations were to be added and the last preceding date was calculated and this was applied to the increase for that last preceding date, to get the current index number. From then on, the series was continued with the added quotations.

[4] In January, 1921, on the old basis the number was 174; on the new basis, 172. *Monthly Labor Review*, March, 1921, p. 27.

[5] Statement from the Bureau of Labor Statistics, September, 1920.

The questionnaire for coal calls for the retail price per ton in ton lots for coal sold to family trade; it includes delivery but no extra charge for storing in cellar or coal bin where extra handling is necessary. Quotations are secured for four sizes of anthracite and for bituminous coal of the kind sold to family trade.[3] For wood, the quotations called for on the questionnaires are the retail price per cord, for cordwood (not kindling wood), sawed, split and delivered. If, however, any given dealer is found to have most of his sales in less than cord lots, this fact is taken into account. Kerosene prices are secured by agents of the Bureau personally. For coal, wood and kerosene, four quotations are secured, except in New York City, where the standard is five.

For gas, the questionnaire is sent to companies in the same 51 cities in which food and coal prices are secured, but reports from only 32 are used in the cost of living index. With the exception of a few places where natural gas is the usual fuel, the net price per thousand cubic feet of artificial gas for household purposes is quoted. While the questionnaire calls for information regarding meter service and other charges, and lighting and heating standards, the estimate of changes in cost to the consumer is based on the net rate. For electricity, changes in net rates per kilowatt hour for household use are secured in 32 cities. Where a city has more than one tariff for domestic consumers, the rates used are those under which most residences are served.

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[1] Coal price questionnaires are sent out every month. Agents of the Bureau originally collected these quotations in the 32 cities in person, but this was abandoned as a needless duplication of effort, since the data were already available from those collected for the retail price series of coal.

[2] Bulletin No. 357, *op. cit.*, p. 73. The Bureau collects prices in the 51 cities where food prices are secured, but uses only 32 in the cost of living index.

[3] Bituminous coal differs as to name in different parts of the country and any specification of standard is well-nigh impossible.

For all items in this group except gas and electricity, where April, 1913 and December, 1913, respectively, constitute the base periods, estimates are made of the average increase in cost since the year 1913.[1] This is done by weighting the price of each item by the average quantity consumed per family in each city. To get the cost for the country as a whole, the average prices of each item, weighted by consumption in each city, are added together and divided by 32, the number of cities. A comparison of these aggregates from one period to another indicates the percentage of change in the cost of each within the period; these percentages, applied to the index numbers on the last preceding date, give the respective index numbers for the current date.

Prices Collected by Special Agents

For housing, clothing, furniture and house furnishings, and miscellaneous items in the family budget, agents of the Bureau of Labor Statistics visit each of the 32 cities covered by the cost of living index four times a year and personally collect quotations on a specified list of articles. For all of the cities except New York at least four quotations are secured for each article; in New York, five are secured. This refers to articles on which prices vary. For certain services, however, such as carfare, for example, where one rate is usually generally prevalent, only one quotation is necessary. For house rent a special condition exists. Quotations are secured at any time during the month and are supposed to represent the month, rather than one given date.

The system is followed of having agents rotate in their coverage of the separate cities, so that the same agent does not visit the same city in two successive quarters. The quotations and descriptions of the various items to be repriced are, however, always filled in on the current questionnaire, and the prices secured each quarter are so far as possible for identical items. As it often happens, however, that the specified type of article will no longer be in stock, the agent is required to make any required substitution, always with the idea of maintaining continuity of standard and comparability of price. Where the previous quotation appears on reinvestigation to be somewhat out of line, adjustments are also made. "The experience of the Bureau is that it is very difficult if not impossible to obtain satisfactory results in this work by correspondence. It requires the personal investigation and careful inquiry of a trained agent who thoroughly understands the work to secure the best results. Wherever substitutions have to be made, prices are secured on the article substituted for the previous price period as well as for the present, so that the figures will always be comparable."[1]

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[1] There are nearly as many methods of determining consumption of electricity as there are cities, and elaborate calculations are required to bring all into comparability. See, for example, *Monthly Labor Review*, August, 1924, pp. 60–65.

Clothing: Quotations for the samples chosen to represent a complete clothing budget are secured from stores largely patronized by wage earners or moderate salaried families and the articles listed are of a grade commonly bought by these classes. In order to expedite the collection of the necessary price data, the large stores from which quotations may be secured on the greatest number of articles are necessarily chosen. Prices are secured so far as possible from superintendents or buyers, and in a large store, a number of such may be interviewed. Quotations are on a cash basis and are regular, not special sale prices. Where, however, as in certain seasons, reductions are well nigh universal, these are taken.

After four quotations have been secured for each of the 71 items listed in the clothing budget, these are averaged for each city separately and multiplied by the quantity weight assigned. The products added together are taken to represent the total cost of clothing in that city. The aggregate thus obtained on one date is compared with the aggregate on the last preceding date. The percentage of change thus ascertained is applied to the index number for the last preceding date to get the index number for the current date. For the country as a whole the index number for clothing is computed in the same way, on the basis of a comparison of the average combined cost in the 32 cities.

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[1] Bulletin No. 326, *op. cit.*, p. 15. See Chapter V of this report for discussion of relative advantage of broad coverage and questionnaires as against fewer quotations and agents.

This was not always the procedure for estimating changes in the cost of clothing. Until June, 1920, no weights were used in making up the clothing budget, but a simple addition of quotations was made, no matter what the relative importance of the items. The effect of weighting, according to tests made for two cities, was to produce a slightly greater increase in clothing prices than was shown by the use of unweighted prices.[1]

Housing: Rents are secured for a number of houses, flats and apartments,[2] varying with the size and general layout of the city. The minimum number of quotations is now supposed to be 400, the maximum, 2,000;[3] earlier, from 200 to 500 houses and apartments were listed.[4] A number of these may be in the same house, however, and rent for the same amount. So far as possible the same piece of property is followed through from year to year. Frequently this has not been possible, however, due to the fact that property has changed hands very frequently in the last few years and, having been removed from the books of the agent furnishing prices to the Bureau, it has not always been possible to trace it to another agent, and substitutions have had to be made. Moreover, it has come to be realized that rents for property ten years older than in the base period are not strictly comparable with rents charged on the earlier date. As the older housing drops from the list, therefore, such substitutions have been made as would make for a more equitable comparison.[5]

In computing the index number for rents, the percentage of change within the quarter is ascertained by comparing the average rent on the current date with that on the last preceding date. The current change is then applied to the index number for housing on the last preceding date to obtain the index number for the current date. No system of weighting based on population of the separate cities is used in combining rents to find the change for the country as a whole, beyond the fact that more quotations are secured in the larger than in the smaller places.

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[1] Statement from the Bureau, September, 1920. For effect of this difference on the clothing index number, see Chapter V of this volume.

[2] The Bureau distinguishes between these as follows: "A house is a building occupied by a single family; a flat is a building in which each family occupies a whole floor; an apartment is a building having living quarters for two or more families on a floor." Bulletin No. 326, *op. cit.*, p. 18.

[3] *Monthly Labor Review*, August, 1924, p. 78.

[4] *Ibid.*, February, 1921, p. 52.

[5] See Chapter V of this volume for the effect of the method of collecting rents on the index number for housing.

Furniture and House Furnishings:[1] The index number for this item is made up exactly as is the one for clothing; namely, the average price for each article for each city is multiplied by its respective unit weight; these products are added together and the percentage of change in the total since the last period when prices were collected is figured. This percentage is applied to the index number for this item for the last preceding date to obtain the current index number. For the country as a whole, the aggregate cost of furniture and house furnishings for all the cities taken together is divided by 32, the number of cities. Percentages of change and index numbers are then computed.

Miscellaneous Items: After unit costs of all the goods and services entering into this group have been secured, each is multiplied by its quantity weight, all are combined and percentage changes noted as for clothing.

The Total Cost of Living

The index number of the total cost of living as computed by the United States Bureau of Labor Statistics for the country as a whole is made up as follows. After the percentage of change in the cost of each major item, such as food, housing, etc., has been found between the last preceding investigation period and the current period, these percentages are applied to the index numbers for each item, respectively, in the last preceding period. The new index numbers thus obtained show the increase in the cost of each major item between 1913 and the date of the current investigation. These increases for the separate items, times their respective weights in the budget, give the weighted index number for the total cost of living in the current period, as related to 1913. A glance at the following tabulation makes the method clear.

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[1] In some statements by the Bureau of Labor Statistics this item is called "House-furnishing Goods." See, for example, Table 6 and Appendix A-1 and Appendix A-2.

METHOD OF COMPUTING UNITED STATES BUREAU OF LABOR STATISTICS INDEX NUMBERS OF THE COST OF LIVING

(Average cost in 1913 = 100)

	(1) Weight in budget	(2) Index numbers, March, 1924	(3) Percentage of change in cost of living, March, 1924 to June, 1924	(4) Col. 2 + or − Col. 3	(5) Col. 4 × Col. 1
Food	38.2	143.7	−0.9	142.4	54.3968
Housing	13.4	167.0	+0.6	168.0	22.5120
Clothing	16.6	175.8	−0.9	174.2	28.9172
Fuel and light	5.3	182.2	−3.0	176.7	9.3651
Furniture and furnishings	5.1	221.3	−2.4	216.0	11.0160
Miscellaneous	21.3	201.1	No change	201.1	42.8343
Total	99.9[a]	170.4	. .	169.1[b]	169.0414

[a] The Bureau of Labor Statistics prints this as 100.

[b] This differs from the total of column 5 because the figures in column 3 were obtained from the index numbers and not the actual average costs.

SUMMARY

The entire method of constructing the United States Bureau of Labor Statistics index numbers of the cost of living is summarized in the tabulation on the following page.

SUMMARY, METHOD OF CONSTRUCTING UNITED STATES BUREAU OF LABOR STATISTICS INDEX NUMBERS OF THE COST OF LIVING IN THE UNITED STATES

	Food	Clothing	Housing	Fuel and Light	Furniture and House Furnishings	Miscellaneous
Number of articles....	1913–1920, 22. 1921–date, 43.	71	Locally representative housing.	6	22	14
Sources of information	Retailers serving working class trade; 15 to 25 firms, depending on size of town.	Retailers serving working class trade; 4 quotations for each item except 5 in Greater New York.	Real estate brokers; 400 to 2,000 houses, depending on size of town.	Retailers serving working class trade; public utility companies; 10 to 15 firms.	Retailers serving working class trade; 4 quotations for each item, except 5 in Greater New York.	Retailers, doctors, hospitals, street car companies, theatres, etc.; 4 quotations for each item except 5 in Greater New York.
Localities covered....	51	32	32	32	32	32
Method of gathering information.........	Questionnaire.	Special agents.	Special agents.	Questionnaire, except special agents for kerosene.	Special agents.	Special agents.
Method of computing change in cost of major item...........	Products of average prices multiplied by unit weights are added together; aggregates compared from one period to another on percentage basis; this percentage applied to index number for last preceding date gives current index number.	Average price of each article, times its unit weight; products added, aggregates compared from one period to another on a percentage basis; percentage difference applied to index number for last preceding period to get current index number.	Percentage of change in aggregate rents from one period to another applied to index number for last preceding period gives current index number.	Cost per ton of coal, and rates for gas and electricity, multiplied by local consumption weights in each city; for country as a whole, average of 32 cities; aggregates compared on a percentage basis from one period to another; this percentage applied to last preceding index number.	Products of average prices in each city multiplied by unit weights are added together; aggregates for 32 cities averaged; compared on a percentage basis from one period to another; this percentage applied to last preceding index number gives current index number.	Products of average prices in each city multiplied by unit weights; aggregates for 32 cities averaged and compared with last preceding aggregate, on a percentage basis; this applied to last preceding index number gives current index number.

CHAPTER IV

INDEX NUMBERS OF THE COST OF LIVING, BY THE MASSACHUSETTS COMMISSION ON THE NECESSARIES OF LIFE

BY THE summer of 1919 prices had advanced so far and conditions attendant thereon were so unsatisfactory that at an extra session of the legislature in Massachusetts in July, 1919, the appointment of a special Commission on the Necessaries of Life was authorized for one year "to study and investigate the circumstances affecting the prices of the commodities which are necessaries of life." The commission was given authority "to inquire into all matters relating to the production, transportation, distribution and sale of said commodities . . . and to study and investigate the circumstances affecting the charges for rent of property used for living quarters or for the production of the necessaries of life." The commission was also given authority to hold hearings, administer oaths, require attendance and testimony of witnesses, to compel the production of books, documents and other papers and to employ counsel.[1] The functions of the Massachusetts Commission on the Necessaries of Life are seen, therefore, to have been largely administrative, with such research as was carried on directed toward ascertaining conditions for the purpose of controlling them. This circumstance should be borne in mind in considering the commission's index number of the cost of living, which tends to run consistently lower than other indexes with which it may be compared. The commission itself was of the opinion that its activities had been of material service in keeping down prices in Massachusetts.[2]

The Commission on the Necessaries of Life in Massachusetts began work in August, 1919, and immediately started to assemble information which could be used in a systematic measure of price increases. Although the base period adopted as representative of normal pre-war conditions was the year 1913, the figures were run back to 1910, in order to connect with the results of a study of the cost of living made in the Commonwealth that year. Thus, figures showing changes in the cost of living are available for Massachusetts not only by months from 1910 to date, but practically from 1901.[1] These are the only data available for so long a period of time for any section of the country, affording a measure of changes in the total cost of living, based on retail prices and weighted according to consumption. The figures for the cost of living as a whole and for each major item separately are shown in Tables 7 to 12 inclusive.

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[1] Report of the Commission on the Necessaries of Life, 1920, *op. cit.*, pp. 9–10.

[2] See, for example, Report of the Commission on the Necessaries of Life, 1920, *op. cit.*, pp. 15–18; *ibid.*, 1921, p. 15; *ibid.*, 1922, pp. 16, 19, 20, 23; *ibid.*, 1924, pp. 11, 14, 15, 16.

Basic Budget

The method used in the construction of this index number of the cost of living in Massachusetts was an adaptation of that used by the National Industrial Conference Board and the weightings used in combining changes in cost of the major groups of items to secure changes in the total cost were those of the National Industrial Conference Board. Thus, in the Massachusetts budget, food is allotted 43.1%; shelter, 17.7%; clothing, 13.2%; fuel and light, 5.6%; sundries, 20.4%.[2] The articles included and other details of the basic budget are in some important respects dissimilar and will be described in detail in the following pages.

Food

The food index is based on the articles and expenditures therefor in the North Atlantic States, as found in the investigation by the United States Bureau of Labor Statistics in 1901. This investigation, which covered 1,415 families in that section of the country, showed, among other things, how much of the total expenditure for food went for each separate article or group of articles.[3] These relative ex-

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[1] Report of the Commission on the Cost of Living, *op. cit.*, p. 72. See also Research Report No. 41, *op. cit.*, pp. 65–66.

[2] Report of the Commission on the Necessaries of Life, 1920, *op. cit.*, p. 111.

[3] Eighteenth Annual Report of the Commissioner of Labor, *op. cit.*, p. 650. The weights are expenditure weights, not consumption weights, such as the Bureau of Labor Statistics uses. The commission reports that at first there was hesitation about using a scale worked out so long ago, but study of later data indicated that it was substantially correct for use in 1919. Of course, some of the individual articles have been changed.

TABLE 7: INDEX NUMBERS OF THE COST OF LIVING, 1910 TO DECEMBER, 1924, INCLUSIVE

(Average prices in 1913 = 100)

(Massachusetts Commission on the Necessaries of Life)

	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
January.....	96.1	96.1	100.7	94.9	101.8	102.9	105.7	119.6	144.6	167.5	192.0	179.5	157.3	157.1	160.1
February....	96.1	95.8	101.5	94.2	101.8	102.1	106.3	121.1	147.0	164.7	190.8	172.8	156.8	158.5	159.7
March......	96.6	95.4	100.7	99.2	101.6	101.0	106.7	122.7	145.7	164.7	193.4	166.4	155.3	157.5	159.2
April.......	96.1	94.3	99.9	99.6	100.4	101.0	108.2	125.3	145.0	167.0	196.3	164.5	155.6	158.5	157.7
May........	95.8	94.3	101.9	99.4	100.1	101.5	108.7	127.5	148.7	169.1	200.3	161.4	154.9	159.1	157.6
June........	96.0	94.3	99.9	100.3	100.6	101.4	110.3	131.0	152.4	170.3	199.7	159.4	155.0	158.9	157.7
July........	96.5	95.6	100.4	100.8	102.1	101.7	109.9	129.3	155.1	171.5	202.6	160.8	156.2	160.1	157.8
August......	96.7	96.1	100.3	100.6	103.1	101.4	110.1	130.0	157.6	174.6	198.5	161.4	155.3	159.5	158.4
September...	97.0	97.3	100.8	100.2	103.3	102.2	112.1	133.1	161.3	173.1	200.1	160.0	155.4	160.3	160.5
October.....	96.7	97.7	101.9	101.0	104.1	103.2	113.6	137.1	164.2	179.9	194.9	159.7	156.6	161.6	160.3
November...	96.6	97.5	101.9	101.0	103.2	103.9	116.2	138.2	165.0	184.5	191.3	159.2	157.7	160.5	159.8
December...	95.1	97.4	100.6	100.8	102.7	103.5	117.5	139.6	166.1	184.7	183.9	159.6	157.5	161.3	161.2

TABLE 8: INDEX NUMBERS OF COMBINED FOOD PRICES, 1910 TO DECEMBER, 1924, INCLUSIVE

(Average prices in 1913 = 100)

(Massachusetts Commission on the Necessaries of Life)

January.....	94.8	95.2	101.0	98.2	102.1	103.2	105.5	126.2	155.8	180.1	200.9	171.5	136.1	139.3	141.0
February....	94.7	94.5	102.9	96.9	101.9	101.1	106.5	129.1	159.3	174.2	195.5	158.6	135.6	141.3	139.9
March......	95.9	93.5	100.7	97.9	101.6	98.5	107.2	132.0	154.4	174.1	198.9	145.1	133.1	138.8	139.0
April.......	95.5	91.5	98.7	99.7	99.5	99.4	108.8	137.5	150.9	176.6	198.2	142.1	135.4	139.3	136.1
May........	94.9	91.6	103.3	99.3	98.9	100.6	110.0	142.1	155.9	179.7	207.9	135.3	134.0	141.0	136.4
June........	95.3	91.5	99.2	101.4	100.1	100.3	113.3	147.5	162.6	181.0	207.9	133.5	134.1	140.0	137.1
July........	96.4	94.2	100.6	102.2	103.3	100.7	112.4	142.9	165.2	182.2	216.9	139.5	137.2	143.4	137.5
August......	96.9	95.4	100.3	101.5	105.3	99.7	112.1	143.6	170.5	187.4	205.1	142.2	136.3	142.0	138.5
September...	97.3	97.9	101.2	100.5	105.7	101.0	116.0	149.3	178.3	182.0	202.5	139.9	136.3	143.5	142.4
October.....	96.7	98.9	103.0	101.7	107.2	102.7	117.3	153.1	179.0	184.7	194.7	138.7	138.2	144.9	142.1
November...	96.5	98.4	103.2	101.8	105.0	104.2	122.2	153.8	180.3	188.9	187.2	137.2	139.9	142.0	141.5
December...	92.9	98.1	100.2	101.2	103.9	103.0	124.7	155.7	183.1	189.1	179.6	139.4	139.8	144.1	143.0

TABLE 9: INDEX NUMBERS OF SHELTER PRICES, 1910 TO DECEMBER, 1924, INCLUSIVE

(Average prices in 1913=100)

(Massachusetts Commission on the Necessaries of Life)

	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
January	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	111.7	118.4	131.0	151.7	162.5	162.5	168.0
February	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	111.7	118.4	131.0	151.7	162.5	162.5	168.0
March	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	111.7	118.4	131.0	153.2	162.5	164.5	168.0
April	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	108.2	115.5	133.8	156.3	162.5	166.0	168.0
May	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	108.2	115.5	134.9	159.4	162.5	166.5	168.0
June	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	108.2	115.5	139.4	159.4	162.5	167.0	168.0
July	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	108.2	115.5	139.4	159.4	162.0	167.0	168.0
August	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	108.2	115.5	142.4	159.4	162.0	167.0	172.0
September	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	108.2	115.5	147.8	161.0	162.0	167.0	172.0
October	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	116.4	129.6	147.8	161.0	162.0	167.5	172.0
November	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	116.4	129.6	150.6	161.0	162.5	167.5	172.0
December	91.0	91.0	102.0	100.0	103.5	104.1	105.3	103.1	116.4	129.6	151.7	161.0	162.5	167.5	172.0

TABLE 10: INDEX NUMBERS OF COMBINED CLOTHING PRICES, 1910 TO DECEMBER, 1924, INCLUSIVE

(Average prices in 1913=100)

(Massachusetts Commission on the Necessaries of Life)

January	99.9	100.0	100.0	99.7	101.5	105.8	114.5	137.7	176.5	221.5	286.2	219.9	180.1	178.0	186.8
February	99.9	100.0	100.0	99.7	101.7	106.8	115.4	137.7	180.4	223.5	291.3	214.4	179.2	182.2	187.4
March	99.9	100.0	100.0	99.7	101.7	106.8	115.4	138.9	180.6	223.8	299.8	208.2	176.9	182.8	186.2
April	99.9	100.0	100.0	99.7	101.7	106.8	121.2	138.9	193.6	235.3	305.5	206.5	176.5	184.0	184.9
May	99.9	100.0	100.0	99.7	101.7	106.8	121.2	138.9	193.6	235.8	302.0	201.6	176.1	183.2	183.3
June	99.9	100.0	100.0	99.7	101.7	106.8	121.2	145.0	193.6	235.8	288.4	197.1	176.5	184.1	181.6
July	99.9	100.0	100.0	99.7	101.7	106.8	121.2	145.0	201.3	235.8	280.9	191.8	176.1	182.1	181.4
August	99.9	100.0	100.0	99.7	101.7	106.8	121.2	145.0	201.3	237.2	282.9	187.1	174.9	182.2	178.8
September	99.9	100.0	100.0	100.9	102.0	107.5	121.6	145.6	202.4	240.9	285.9	186.7	177.6	183.4	180.6
October	99.9	100.0	99.8	100.9	103.3	108.8	125.2	159.9	209.4	256.3	268.9	186.2	178.4	185.9	180.1
November	99.9	100.0	99.8	100.9	103.3	108.8	125.2	159.9	209.4	271.6	258.3	187.6	179.1	187.0	178.4
December	99.9	100.0	99.8	100.9	103.3	108.8	125.2	159.9	209.4	272.3	226.0	186.1	179.4	186.1	181.2

TABLE 11: INDEX NUMBERS OF COMBINED FUEL AND LIGHT[a] PRICES, 1910 TO DECEMBER, 1924, INCLUSIVE

(Average prices in 1913 = 100)

(Massachusetts Commission on the Necessaries of Life)

	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
January	99.0	96.9	97.6	104.3	101.9	101.0	101.3	113.2	125.3	143.	154.2	188.8	174.9	184.8	178.4
February	99.0	96.9	97.6	102.2	101.9	101.0	101.3	113.2	125.3	135.1	160.7	188.3	174.9	184.2	178.6
March	99.0	96.9	101.2	102.2	101.9	101.0	101.3	113.2	125.3	135.1	161.6	187.5	173.7	178.2	178.8
April	92.6	92.3	101.8	95.7	95.5	94.2	101.3	114.7	125.3	135.7	170.8	177.4	172.8	178.6	177.1
May	92.6	92.3	101.8	95.7	95.5	94.2	99.2	114.7	125.3	140.0	171.1	176.8	172.8	177.5	177.0
June	92.6	92.3	97.5	95.7	95.5	94.2	101.3	114.7	125.7	144.3	171.7	176.1	172.7	177.4	177.2
July	94.1	94.5	97.5	97.8	97.3	96.4	101.0	114.7	132.1	145.8	172.1	175.9	172.0	178.2	177.5
August	94.1	94.5	97.5	100.0	99.5	98.5	102.9	114.7	132.1	150.1	175.0	175.9	172.9	177.0	177.4
September	96.3	96.6	99.6	100.0	99.5	98.5	102.9	114.7	132.1	150.1	188.5	175.4	177.0	177.7	179.6
October	95.7	96.6	103.9	102.2	99.5	98.5	106.9	114.7	132.6	150.7	189.2	180.9	182.6	181.6	179.3
November	95.7	96.6	103.9	102.2	99.5	98.5	113.3	114.7	133.8	152.9	190.0	180.5	184.5	182.1	179.2
December	95.7	96.6	103.9	102.2	99.5	100.7	113.3	114.7	143.1	153.5	189.9	180.5	184.8	181.7	179.4

TABLE 12: INDEX NUMBERS OF COMBINED PRICES OF SUNDRIES, 1910 TO DECEMBER, 1924, INCLUSIVE

(Average prices in 1913 = 100)

(Massachusetts Commission on the Necessaries of Life)

January	100.0	100.0	100.0	100.0	100.0	100.0	102.0	110.0	134.0	155.0	175.9	192.0	178.0	168.8	171.4
February	100.0	100.0	100.0	100.0	100.0	100.0	102.3	110.0	136.0	155.0	175.9	190.0	177.0	168.8	171.4
March	100.0	100.0	100.0	100.0	100.0	100.0	102.5	112.0	140.0	155.0	175.9	190.0	177.0	168.8	171.4
April	100.0	100.0	100.0	100.0	100.0	100.0	103.0	113.0	143.0	156.0	183.0	188.0	174.0	170.5	171.4
May	100.0	100.0	100.0	100.0	100.0	100.0	103.3	114.0	146.0	158.0	183.0	188.0	174.0	170.5	171.4
June	100.0	100.0	100.0	100.0	100.0	100.0	103.5	116.0	150.0	160.0	185.0	185.0	174.0	170.5	171.4
July	100.0	100.0	100.0	100.0	100.0	100.0	104.0	117.0	151.0	163.0	185.0	183.0	174.0	170.5	171.4
August	100.0	100.0	100.0	100.0	100.0	100.0	105.0	119.0	152.0	165.0	185.0	183.0	172.0	170.5	170.5
September	100.0	100.0	100.0	100.0	100.0	100.5	106.0	122.0	153.0	167.0	188.0	180.0	169.7	170.5	170.5
October	100.0	100.0	100.0	100.0	100.0	101.0	107.0	124.0	154.0	172.0	190.0	180.0	169.7	170.5	170.5
November	100.0	100.0	100.0	100.0	100.0	101.3	108.0	128.0	155.0	175.0	192.0	180.0	169.7	170.5	170.5
December	100.0	100.0	100.0	100.0	100.0	101.5	109.0	130.0	155.0	175.0	192.0	178.0	168.8	170.5	172.2

[a] The table heading in the commission's reports does not include light. The numbers given, however, are those released as fuel and light.

penditures in one year for the separate articles were as follows:

Allocation of Commodity Weightings in the Food Index of the Massachusetts Commission on the Necessaries of Life

Fresh beef	1,605
Salt beef	242
Fresh hog products	379
Salt hog products	361
Other meat	363
Poultry	301
Fish	298
Eggs	545
Milk	718
Butter	881
Cheese	75
Lard	241
Tea	187
Coffee	287
Sugar	493
Molasses	45
Flour and meal	480
Bread	456
Rice	57
Potatoes	407
Other vegetables	476
Fruit	453
Vinegar, pickles and condiments	120
Other food	530
Total	10,000

The list of articles priced by the Massachusetts Commission on the Necessaries of Life were, however, different from those used by the Bureau of Labor Statistics and the former index is correspondingly different from the retail food price index number of the latter. The Massachusetts list, given below, was adapted to take account of known consumption tastes and the means available for satisfying them.[1]

List of Commodities in Combinations Included in the Food Index of the Massachusetts Commission on the Necessaries of Life

Fresh beef, per pound:
  Steak: Sirloin steak and rump steak
  Roasts and stews: Chuck roast not boned, round roast.
    (The above cuts are given equal weight in the item of fresh beef.)
Salt beef, per pound:
  Fancy brisket
Fresh hog products, per pound: Fresh pork loins

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[1] This list is taken from the questionnaires sent to retail dealers and differs slightly in details from the list published in each annual report.

Salt hog products, per pound:
  Ham, whole
  Bacon, whole
  Salt pork
    (The above are given equal weight in the item of salt hog products.)
Other meat, per pound:
  Lamb, hind quarter
  Veal steak
    (The above are given equal weight in the item of other meat.)
Poultry, per pound:
  Fowl, western
Fish, per pound:
  Salt cod, scrap
  Fresh haddock, whole
    (The above are given equal weight in the item of fish.)
Eggs, fresh western, per dozen
Milk, bottled, per quart
Butter, good creamery, per pound
Cheese, American, mild, per pound
Lard, leaf, per pound
Tea, medium grade, per pound
Coffee, Mocha and Java, per pound
Sugar, granulated, per pound
Molasses, per gallon
Flour and meal:
  Wheat flour, ⅛-barrel bag
  Corn meal, yellow, per pound
    (Flour is given a weighting of 2 and corn meal 1 in the item of flour and meal.)
Bread, wrapped, 1½ pound loaf
Rice, per pound
Potatoes, white, per peck
Other vegetables:
  Onions, per pound
  Canned tomatoes, medium grade, No. 3 can
  Canned peas, medium grade, No. 2 can
  Canned corn, medium grade, No. 2 can
    (The above are given equal weight in the item of other vegetables.)
Fruit, per pound:
  Evaporated apples
  Prunes, 40–50 size
    (The above are given equal weight in the item of fruit.)
Vinegar, gallon
Other food:
  Dried beans, California white, per pound
  Oatmeal, 20-oz. package
    (Dried beans are given a weighting of 2 and oatmeal 1 in the item of other food.)

Shelter

The basis for the index of rents is "rentals charged for many houses in many parts of the Commonwealth. These ranged in 1910 from $12 to $32 per month, and in December, 1919, from $15 to $40 per month. The list includes single, two-family and three-family houses, and middle priced apartments, heated and unheated."[1]

Clothing

The Commission on the Necessaries of Life, like other makers of index numbers of the cost of living, has resorted to the sampling method in relation to clothing prices. Budget items and their respective weights are as follows:

Allocation of Weightings in the Clothing Index of the Massachusetts Commission on the Necessaries of Life

Men's

Overcoat	39
Suit	
Trousers	
Shoes	15
Hats	4
Gloves	6
Socks	4
Shirts	6
Collars	2
Underwear	6
Night garments	2
Total	84

Women's

Suit	27
Topcoat	
Street dress	
Underwear	5
Waists	18
Kimono	
House dress	
Aprons	
Nightgown	
Underskirt	
Shoes	12
Gloves	3
Hosiery	2
Corsets	4
Hats	9
Total	80

This list of articles was selected and the quantity weights devised in 1919 on the basis of existing information on the subject.[1] Prices are not secured on all of the articles noted. The questionnaire used lists the following, for which quotations are secured:

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[1] Commission on the Necessaries of Life, Report, 1923, *op. cit.*, p. 248.

Men's clothing

Blue serge suit, each
Shoes, tan oxford, pair
Hats, brown felt, each
Gloves, mocha, outseam, pair
Hosiery, mercerized cotton, pair
Shirts, madras, each
Collars, each
Underwear, per suit (medium weight union suit)

Women's clothing

Underwear, per suit (light weight combed cotton)
Berkley cambric No. 60, per yard
Percale, 64 square, per yard
Percale, 80 square, per yard
Gingham (apron), per yard
Cotton voile, plain white, 40 inches, per yard
Cotton voile, plain white, 44 inches, per yard
Shoes, black kid oxford, pair (Goodyear welt, Cuban heel)
Shoes, tan kid oxford, pair (Goodyear welt, Cuban heel)
Hosiery, mercerized cotton, pair (full fashioned)
Hosiery, silk 10 strand, pair (full fashioned)
Hosiery, silk 11 strand, pair (full fashioned)

Fuel and Light

This item is made up of coal, kerosene, gas and electricity, on the basis of the following weightings: coal, 10; kerosene, 1; gas, 2; electricity, 2. These weightings are said to be based on a study of such data concerning family expenditures as was available in 1919;[2] the type of family is that of wage earners throughout the state.[3] Domestic size anthracite is the only kind of coal used in computing the index for that item.

Sundries

The commission points out consistently that the sundries item is the most difficult of any of which to measure cost changes, because expenditures for this miscellaneous group of goods and services are dependent entirely on the tastes and resources of the individual family. To represent average changes in the cost of sundries the commission has adopted the list used by the National Industrial Conference Board in its first investigation of the actual minimum cost of living, except for ice and organization dues.[1] The weights therefor, are adjusted to take account of the difference. The list follows:

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[1] No details regarding this are available.

[2] No details regarding this are available.

[3] Commission on the Necessaries of Life, Report, 1923, *op. cit.*, p. 250.

ALLOCATION OF WEIGHTINGS IN THE SUNDRIES INDEX OF THE MASSACHUSETTS COMMISSION ON THE NECESSARIES OF LIFE

Ice	15
Carfare	15
Entertainment	25
Medicine	25
Insurance	50
Church	30
Tobacco, etc	20
Reading	10
House furnishings	45
Organizations	25
Total	260

METHOD OF COLLECTING AND COMBINING CURRENT PRICES

The Massachusetts Commission on the Necessaries of Life collects its current price information partly by special agents, partly by mail and partly from trade quotations. These are assembled on or about the fifteenth of each month and the index numbers are published about one month after the date of the basic quotations. As far as is known, the same procedure has been followed consistently since the inception of the number. Whenever the commission loses the co-operation of a firm which had furnished information,[2] another dealer of the same type is selected to take his place.

Food

Food prices "are taken weekly from market quotations and collected by questionnaires sent or personal visits to individual dealers about the fifteenth of each month." The regular list of places covered includes Attleboro, Belmont, Metropolitan Boston, Brockton, Brookline, Cambridge,

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[1] Research Report No. 22, *op. cit.*, p. 11.

[2] This would happen usually only when the co-operating firm goes out of business, since the commission has power to secure the facts it requires.

Fall River, Fitchburg, Gardiner, Greenfield, Haverhill, Holyoke, Lawrence, Lowell, Lynn, Melrose, New Bedford, North Adams, Northampton, Pittsfield, Salem, Springfield, Somerville, Taunton, Wakefield, Woburn and Worcester. About 100 quotations are secured for each item, but these are independent from month to month, in that the previous month's quotation is not filled in on the questionnaire each time. Specification is made of the grade for those goods about which some doubt might arise as to quality; when prices are received which seem out of line they are made the subject of special study.

The commission has no difficulty in securing cooperation from dealers in getting these prices, since it has the power of summons to obtain necessary facts. The sources of information throughout the state are distributed in a general way on the basis of population. All quotations secured for each item are averaged and the average price on the current date is divided by the average price in 1913, the base date, to get the percentage relationship. Each of these relatives is then multiplied by its respective weight, and the sum of the products divided by the sum of the weights gives the current index number.

Shelter

The rent index of the Massachusetts Commission on the Necessaries of Life is in the nature of a general estimate based on a considerable breadth of experience. The commission describes its sources of information as follows:

> "Under the law the commission is required to study and investigate the circumstances affecting the charges for rent of property used for living quarters. The commission is also required to investigate all complaints made to it. From three hundred to five hundred complaints are received by it monthly in regard to rent and housing matters. In Boston a local committee created to cooperate with the commission receives about the same number of complaints each month. In Worcester, Lawrence, Brockton, and other cities throughout the state where housing conditions warrant, representatives of the commission are designated by the local authorities. The information secured from this administrative function of the commission is of tremendous value in connection with the preparation of its shelter index.
>
> "Special surveys are made from time to time in the principal com-

> munities of the commonwealth. Police and local officials, real estate agents, and other interested parties, as well as personal investigations of rents charged by landlords and paid by tenants are the principal methods used in obtaining information in regard to rents. Records of property transfers, foreclosures, mortgages, and building costs are currently studied in connection with general housing conditions.
>
> "Rents do not change as frequently or as violently as other items of the family budget. Real estate values are usually the last to go up in a rising market and the last to come down in a falling market.
>
> " . . . Most tenants in the state pay rent on a monthly basis, with the exception of some of our industrial centers where many tenants pay rent on a weekly basis. However, Massachusetts has emergency housing laws which provide that tenants should be given a minimum notice of 30 days in which to vacate property, except for non-payment of rent. If the tenant is unable to find other suitable quarters at the expiration of 30 days, he may receive an extension of time in which to vacate at the discretion of the court for not exceeding six months. Therefore, in compiling data on which to base its shelter index, the commission usually covers a period of about four months. . . .
>
> "The commission is kept in close touch with housing conditions throughout the state by its activities in investigating and adjusting thousands of individual housing cases, and consequently it has been able to obtain much material on which to base its shelter index."[1]

Clothing

Although 11 articles are listed in the men's clothing budget and 15 in the women's, as a matter of fact prices are secured on only 20 items, and these are not in all cases the identical articles listed in the budgets themselves. Thus the Commission says,

> "The standard blue serge suit has been used as the basis of quotation for men's outer garments. Overcoats have varied in weight and style, and it has been almost impossible to find a standard of quotation. Overcoating fabric prices of uniform weight have, however, advanced in the same ratio as blue serge prices, and therefore the index of the serge suit cost, which is almost identical with the index of serge fabric costs, has been used as a basis for the suit, overcoat and trousers items. For night garments the composite of cotton fabrics has been used, as all cheaper cotton fabrics have advanced in nearly the same ratio, and the quotation will therefore cover night garments made of either Canton or Domet flannels or long cloth. In the list of women's clothes the same index based upon blue serge has been used for the topcoat, suit and street dress. The items of nightgowns, underskirt,

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[1] Commission on the Necessaries of Life, letter to the National Industrial Conference Board, November 8, 1924.

> kimono, waists, house dresses and aprons are combined, and the average index of cotton piece goods has been used."[1]

For the 20 items listed on the clothing questionnaire quotations are secured either by special agent or by mail from substantially the same 27 places in which food prices are secured. About 100 sources of information are tapped each month, by special agent, if possible. Quotations furnished the preceding month are filled in the questionnaire for reference. The quotations thus secured are averaged for each item for the state, not for separate cities, and each average is expressed as a relative of its 1913 price. These are then given their respective weights. The sum of these weighted relatives divided by the sum of the weights shows the index number for clothing.

Fuel and Light

The index number for this item is based on the selling prices of anthracite and kerosene and rates for gas and electricity in Boston, Springfield, Worcester, Lowell, Lawrence, New Bedford and Fall River. In addition, the commission is empowered to collect certain basic data regarding coal about every two months in every city in the Commonwealth. Frequent comparison may be made, therefore, of prices in the cities chosen as samples, with conditions throughout the state.

Approximately 211 quotations for coal are used in making up the index each month; the kerosene quotations are taken from grocery questionnaires and the gas and electric rates are obtained from the Department of Public Utilities. Quotations for each of these items are averaged and after the current price of each is reduced to a relative of the 1913 average price, each is multiplied by its respective weight; the sum of these products divided by the sum of the weights gives the current index number.

Sundries

The changes in the costs of all goods and services entering into this major item, with the exception of ice and organization dues are those given by the National Industrial Conference Board. The commission obtains quotations from individual ice dealers and from organizations to complete its sundries figure. The number of these quotations is not available. The reports of the commission include fragmentary comment on the different items, with no attempt to discuss each of them each time. In 1920, for example, and each succeeding year the ice problem was discussed at length and changes in its cost sometimes have been specifically estimated;[1] carfares, moving picture theatre admissions, prices of reading matter, household furniture and furnishings have been noted in each report,[2] although with few indications as to the estimated change in cost or how it was ascertained. Medical care in 1920 included a report on physicians' fees, drugs and medicines;[3] in 1921 and 1922 this item was not mentioned at all; in 1923 and 1924, only drugs, medicines and "patent" medicines were mentioned.[4] In 1920, the increases in the cost of insurance and tobacco, in church contributions and dues were estimated at definite percentages;[5] in 1921 and 1922 these were not listed; in 1923 and 1924 only insurance and tobacco are mentioned.[6]

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[1] Report of the Commission on the Necessaries of Life, 1923, *op. cit.*, p. 249.

Having found the percentage of change in cost of each of these various sundries items on a specified date, and its new unit cost, each of these is in turn reduced to a relative of its 1913 cost. After that the procedure involves weighting and the other arithmetical processes used for the other major items to get the index for sundries as a whole.

The Total Cost of Living

Having found the increase in the cost of each major item in the family budget since 1913 by the methods described in the foregoing pages, the increase in the total cost of living since 1913 is found by the same formula as that used by the National Industrial Conference Board and illustrated on page 60 of this volume. That is, the index number for each major item is multiplied by its respective weight in the budget and these products, added together, are divided by the sum of the weights.

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[1] Report of the Commission on the Necessaries of Life, 1920, *op. cit.*, pp. 105–107; *ibid.*, 1921, p. 70; *ibid.*, 1922, pp. 17–18, 85; *ibid.*, 1923, pp. 12–13, 239; *ibid.*, 1924, pp. 16, 136.

[2] *Ibid.*, 1920, pp. 107–108; *ibid.*, 1921, pp. 70–72; *ibid.*, 1922, pp. 85–86; *ibid.*, 1923, pp. 239–241; *ibid.*, 1924, pp. 135–136. Carfares are not noted in 1924.

[3] *Ibid.*, 1920, p. 107.

[4] *Ibid.*, 1923, p. 240; *ibid.*, 1924, p 135.

[5] *Ibid.*, 1920, p. 108.

[6] *Ibid.*, 1923, p. 240; *ibid.*, 1924, pp. 135, 136.

SUMMARY

The method of collecting and combining data for the cost of living index number of the Massachusetts Commission on the Necessaries of Life is shown in the tabulation on the following page.

SUMMARY, METHOD OF CONSTRUCTING MASSACHUSETTS COMMISSION ON THE NECESSARIES OF LIFE INDEX NUMBERS OF THE COST OF LIVING IN MASSACHUSETTS

	Food	Shelter	Clothing	Fuel and Light	Sundries
Number of articles	37	General estimate.	20	4	10
Localities covered	27	100	27	7	[a]
Sources of information	Individual dealers; about 100 quotations per item.	Local officials, real estate agents, other interested parties.	Individual dealers; about 100 quotations per item.	Individual dealers; about 211 quotations for coal; gas and electricity from Dept. of Public Utilities.	[a]
Method of gathering information	Questionnaire and special agents.	Special surveys; complaints lodged.	Questionnaire and special agents.	Questionnaire and special agents.	[a]
Method of computing change in cost of each major item	Average price of each article divided by 1913 average, result multiplied by unit weight, sum of the products divided by the sum of the weights.	General estimates made from special surveys and housing complaints.	Average price of each article divided by 1913 average, result multiplied by unit weight, sum of the products divided by the sum of the weights.	Average price of each article divided by 1913 average, result multiplied by unit weight, sum of the products divided by the sum of the weights.	[a]

[a] National Industrial Conference Board figure used except for ice and organizations for which data are secured from individual dealers for ice and from organizations by questionnaire and special agents. Changes are computed "as for food, except National Industrial Conference Board figure is used as relative and multiplied by unit weight."

CHAPTER V

INDEX NUMBERS OF THE COST OF LIVING COMPARED

IN THE chapters immediately preceding, the more important index numbers of the cost of living in the United States have been described in some detail. These include two series for the country as a whole and one for an entire state. The numbers constructed by various local organizations have not been described here, because, while of significance locally, they are compiled for the most part in the same way as the numbers already discussed, and the trend in the price level shown by them is so nearly comparable with those pictured here that further details add little to the knowledge already available.[1]

A comparison of the three principal series of cost of living index numbers shows that the trend of all has been practically identical, with prices mounting slowly until 1917, reaching a peak in 1918, retarded in 1919, and climbing to their highest point in the summer of 1920, after which they dropped to low levels in 1922, only to rise again until in 1924 they were about where they were at the end of 1921.

While the trends have been so similar as to be nearly identical, the degrees of change shown by these three series have at times differed considerably. Since 1919, with the exception of a very few months, the Massachusetts series has run slightly lower than the National Industrial Conference Board numbers, whereas the Bureau of Labor Statistics series since 1918 has run consistently higher.[2] Attention has already been called to the fact[3] that certain administrative duties of the Commission on the Necessaries of Life in Massachusetts possibly have tended to hold down prices in that state to some extent.[1] There may be other reasons, also, to account for the relatively smaller increases recorded in Massachusetts than for the country as a whole. The significant feature of the Massachusetts index number is that it is the only series which affords a measure of changes in the cost of living over a period antedating 1913, since by linking these figures to other Massachusetts data, estimates of changes in the cost of living in that state since 1901 may be made.[2] For the period for which other data are lacking, namely, 1901 to 1913, it is probable that the Massachusetts figures underestimate but slightly, if at all, the situation for the country as a whole.[3] For the period since 1919, they may be slightly lower than would have been the case had it not been for the administrative activities of the commission, but for the most part these differences are very small.

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[1] The number compiled by an important manufacturing concern in Peoria, Ill., was discontinued in May, 1921, because the results were so closely in accord with the series compiled by the National Industrial Conference Board and the United States Bureau of Labor Statistics that it was thought local surveys were no longer necessary.

[2] The Bureau of Labor Statistics series, so far as is known, is higher than any other which has been constructed in this country.

[3] See p. 89 of this volume.

The two series which purport to measure changes in the cost of living for the country as a whole show results at times so different that the validity of either has been questioned. A detailed explanation of the differences is, therefore, highly desirable for the purpose of reconciling them, if possible.

It should be recognized at the outset that although the results of attempts to measure changes in the cost of living are expressed in exact mathematical terms, the nature of the problem and the basic data of necessity are such as to require a certain breadth in the interpretation of results. Thus, as will appear later, it is perhaps more remarkable that the two series have been as close together as they have than that they are not exactly in line.

The differences between the two series up to 1918 were very small. This is largely because both were estimates, based to a considerable extent on the same incomplete data.[4]

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[1] The commission took up its duties August 1, 1919; the numbers in the cost of living series prior to that date were estimates of price changes not affected by the administrative activities of the commission.

[2] See p. 90 of this volume.

[3] The retail food price series of the Commission on the Necessaries of Life runs about 2% lower for Massachusetts than that of the United States Bureau of Labor Statistics for the country as a whole.

[4] *Monthly Labor Review*, October, 1919, pp. 1–8; *ibid.*, November, 1919, pp. 192–193; *ibid.*, January, 1920, p. 97; National Industrial Conference Board, Research Report No. 17, *op. cit.*, pp. 28–29.

By the end of 1918 the trends of the two series, while still in the same direction, began to show a greater divergence. The Board's number for November was 94.6% of the Bureau's number for December. In the next years the differences continued with slight variations, the numbers being now somewhat nearer, now somewhat further apart. The maximum difference occurred in May, 1921, when the Bureau's number was 7% higher than the Board's number for March and 11% higher than the number for July. Since then, the average difference has been about 5%.[1]

The difference between the two series for the cost of living as a whole is repeated for the separate items. Thus, prior to 1918, clothing and fuel and light costs were higher in the National Industrial Conference Board series than in that of the Bureau of Labor Statistics and lower afterwards; rents in the National Industrial Conference Board series have always been higher and sundries costs have always been lower than in the Bureau of Labor Statistics series. The comparative trends of the two sets of lines for the separate items are shown in Chart 3.

It was pointed out in Chapter I that certain fundamental considerations connected with the making of index numbers might affect the results. In succeeding chapters these principles were illustrated in descriptions of the basic budgets and the methods of collecting and combining current price data of certain of the more important cost of living index numbers. In order to determine whether or not there are fundamental differences between the National Industrial Conference Board series and the United States Bureau of Labor Statistics series, these circumstances must be carefully

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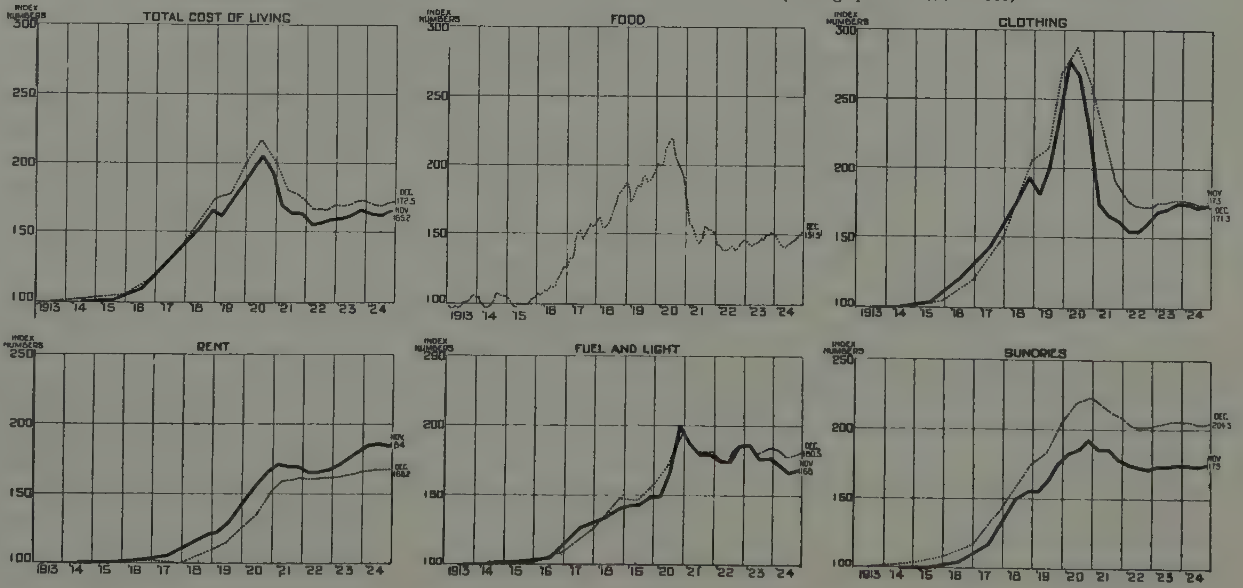
[1] Although the National Industrial Conference Board number is recorded as an increase above July, 1914, and the Bureau of Labor Statistics number as the increase above average prices in 1913, these bases are practically identical, and the series may be compared as they stand. This is because, as already explained in Chapter II, the difference between the average retail price level in 1913 and July, 1914, as measured in a balanced cost of living budget was due almost exclusively to an increase in food prices, and this is taken account of in the series of the National Industrial Conference Board, since the Bureau of Labor Statistics index number, unconverted to a July, 1914 base, has been used by the Board as a measure of food prices in its series. To all intents and purposes, therefore, the increase reported by the Bureau of Labor Statistics since 1913 exaggerates only slightly, if at all, what would have been the increase if the series had been reduced to a July, 1914 base for comparison with the increase reported by the National Industrial Conference Board since July, 1914.

CHART 3: INDEX NUMBERS OF THE COST OF LIVING IN AVERAGE AMERICAN COMMUNITIES BY SEPARATE BUDGET ITEMS AND FOR ALL ITEMS COMBINED, 1913 TO DECEMBER, 1924

—NATIONAL INDUSTRIAL CONFERENCE BOARD
(Average prices in July, 1914 = 100)

······UNITED STATES BUREAU OF LABOR STATISTICS
(Average prices in 1913 = 100)



considered. Although both series of numbers relate to the standard of living of working class families, the basic budgets may differ as to (a) the period to which the consumption weights relate, and (b) the goods and services used as samples. The method of collecting and combining the data may differ as to (a) localities covered, (b) use of questionnaires or special agents.

BASIC BUDGET

The basic budgets used by the National Industrial Conference Board and by the United States Bureau of Labor Statistics in constructing their respective cost of living index numbers in each instance represent the needs of working class families. There is within this description, however, a considerable latitude for differences in standards, not only as regards the character of the goods and services consumed, but also as regards the proportions in which each is used. Moreover, each index number is based on price changes of a group of samples chosen so as to represent total consumption. The choice of these naturally will to some extent affect the result.

Period of Consumption Investigation

As noted in Chapter III, the expenditures which form the basis of sampling and weighting in the Bureau of Labor Statistics index number relate for the most part to some time in the years 1918 or 1919. The items purchased, their quantities and costs were perpetuated in the cost of living index number, leaving entirely out of account possible shifting in expenditures because of increased incomes during the war period.[1] The National Industrial Conference Board budget, on the other hand, was designed as a pre-war budget representative of conditions in July, 1914.

A glance at Table 3 and Table 6 indicates that in 1918 and 1919 the price of clothing and of furniture and furnishings had increased far more than the cost of any other major item in the budget. Rents, on the other hand, were lagging conspicuously behind in the price advance, and fuel and light costs also were still relatively low. Thus, if families had maintained their pre-war standard of living a larger proportion of the budget would necessarily be spent for those items the prices of which had gone up the most, and a relatively smaller proportion for those of which prices had advanced more conservatively.

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[1] The communities where the basic budget investigation for the Bureau of Labor Statistics series was made were shipbuilding and other industrial districts acutely affected by the war, and in which wage increases perhaps allowed an unusual surplus for goods not ordinarily purchased.

It is quite likely, however, that the pre-war standard was not retained, and that in 1918 and 1919, in the great bulk of communities where the survey of the cost of living was made by the Bureau of Labor Statistics, more luxury goods, of a more expensive type, were purchased than was the case under conditions prevailing in preceding years. In other words, that American workmen whose incomes were greatly increased during these years spent some of their earnings for better clothing, more expensive furnishings and other sundries.[1] These items of expenditure are most elastic of all in their adjustability to income.[2] It is only natural to suppose, therefore, especially as very little housing was built to meet demands for better living quarters,[3] that American workmen expressed their improved status in better clothing, household furnishings and equipment. An investigation of incomes and expenditures, most of which covered the year 1918, would inevitably have reflected this in both the quality and the quantity of goods consumed.

From the point of view of total expenditure, this meant that rents were relatively a less important item and that clothing and sundries were relatively more important than was the case under pre-war conditions. Translated into weights by means of which to give increased prices their relative importance, in estimating the increase in the cost of living as a whole, it is possible that the effect of multiplying heaviest weights by largest increases and lightest weights by smallest increases was to exaggerate the increase in the total cost of living as contrasted with a total made up of pre-war weights and the same increases.

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[1] Observations of conditions at that time indicated that such was the case.

[2] It is a well-demonstrated fact that as total expenditures increase, the proportions spent for clothing and for sundries increase.

[3] This was one of the complaints during the war period, where workingmen's families with greatly increased incomes wanted better living quarters and could not find them.

TABLE 13: INDEX NUMBERS OF THE COST OF LIVING IN THE UNITED STATES, USING WEIGHTS BASED ON 1918 CONSUMPTION, AND WEIGHTS BASED ON 1913 CONSUMPTION, AND THE SAME INCREASES IN COST OF THE SEPARATE ITEMS[a]

Date	Food	Clothing	Housing	Fuel and Light	Furniture and Furnishings	Miscellaneous	All Items, 1918 Weights	All Items, 1913 Weights
Basic weight, 1918......	38.2	16.6	13.4	5.3	5.1	21.3	100.0	..
Basic weight, 1913......	34.3	13.6	20.6	6.0	4.0	21.5	..	100.0
Average, 1913.......	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
December, 1914.......	105.0	101.0	100.0	101.0	104.0	103.0	103.0	102.7
December, 1915.......	105.0	104.7	101.5	101.0	110.6	107.4	105.1	104.7
December, 1916.......	126.0	120.0	102.3	108.4	127.8	113.3	118.3	116.6
December, 1917.......	157.0	149.1	100.1	124.1	150.6	140.5	142.4	138.4
December, 1918.......	187.0	205.3	109.2	147.9	213.6	165.8	174.4	167.6
June, 1919.......	184.0	214.5	114.2	145.6	225.1	173.2	177.3	170.8
December, 1919.......	197.0	268.7	125.3	156.8	263.5	190.2	199.3	190.8
June, 1920.......	219.0	287.5	134.9	171.9	292.7	201.4	216.5	207.3
December, 1920.......	178.0	258.5	151.1	194.9	285.4	208.2	200.4	195.2
May, 1921.......	144.7	222.6	159.0	181.6	247.7	208.8	180.4	178.4
September, 1921.......	153.1	192.1	160.0	180.7	224.7	207.8	177.3	176.1
December, 1921.......	149.9	184.4	161.4	181.1	218.0	206.8	174.3	173.8
March, 1922.......	138.7	175.5	160.9	175.8	206.2	203.3	166.9	167.1
June, 1922.......	141.0	172.3	160.9	174.2	202.9	201.5	166.6	166.8
September, 1922.......	139.8	171.3	161.1	183.6	202.9	201.1	166.3	166.8
December, 1922.......	146.6	171.5	161.9	186.4	208.2	200.5	169.5	169.6
March, 1923.......	142.0	174.4	162.4	186.2	217.4	200.3	168.8	168.8
June, 1923.......	144.3	174.9	163.4	180.6	222.2	200.3	169.7	169.7
September, 1923.......	149.3	176.5	164.4	181.3	222.4	201.1	172.1	172.1
December, 1923.......	150.3	176.3	166.5	184.0	222.4	201.7	173.2	173.1
March, 1924.......	143.7	175.8	167.0	182.2	221.3	201.1	170.4	170.6
June, 1924.......	142.4	174.2	168.0	177.3	216.0	201.1	169.1	169.7
September, 1924	146.8	172.3	168.0	179.1	214.9	201.1	170.6	171.0
December, 1924	151.5	171.3	168.2	180.5	216.0	201.7	172.5	172.7

[a] The figures in this table are those of the United States Bureau of Labor Statistics or were constructed from their figures, as described in the text.

To test out this theory Table 13 has been constructed. This gives the Bureau's index number series for each item separately and for all combined, on the basis of the 1918 weights—that is, the official number. It also gives, in the last column, a new series for the total cost of living, based on the same index numbers for the major items, but combined on the basis of 1913 weights. In other words, from the known distribution of expenditures in 1918 and known increases in cost between 1913 and 1918, the distribution of expenditures in 1913, the base period, has been computed[1] and substituted in the series for the official weights based on the 1918 distribution. The difference between the two series is seen to have increased as the prices of the different items advanced in varying proportions. At the peak, when the cost of clothing had increased 187.5% and that of housing only 34.9%, the maximum difference, 9 points, occurred. Where, however, increases in the cost of the major items were more nearly uniform and none of them so tremendous, the two series were identical, or nearly so. In other words, at the peak of prices, with very uneven price increases recorded for the different items, the advance in the total cost of living obtained by using wartime weights was greater than would have been the case had weights been used based on pre-war consumption. During most of the period of the series, the difference due to the effect of the weights was negligible.

This test assumes, however, the consumption of the same goods and services in 1913 as in 1918. In other words, it changes the series only to eliminate the effect of price increases on expenditures. To convert the Bureau of Labor Statistics series to a pre-war basis as regards consumption habits, pre-war weights based on these habits should be used. For this purpose, the increases in cost of the separate items since 1913, as found by the Bureau of Labor Statistics, have been multiplied by the weights used in the National Industrial Conference Board series for each date on which the Bureau has figures. These weights are based on pre-war consumption.[2] (See table, page 113.)

This rearrangement made by using increases in prices ascertained by the Bureau of Labor Statistics and budget weights of the National Industrial Conference Board brings the index for all items throughout the series nearer that of the National Industrial Conference Board series than either the official Bureau of Labor Statistics index or the latter's index adjusted to eliminate the effect of price increases. Other

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[1] The 1913 weights were determined by using the geometric reversal; the arithmetic produces a total in excess of 100.

[2] See Chapter II.

Date	Index Number
Average, 1913	100.0
1914, December	103.0
1915, December	104.7
1916, December	118.0
1917, December	141.1
1918, December	171.0
1919, June	173.4
December	193.0
1920, June	210.5
December	194.0
1921, May	174.2
September	172.8
December	170.3
1922, March	162.9
June	162.9
September	162.7
December	166.1
1923, March	164.9
June	166.0
September	168.8
December	169.8
1924, March	166.7
June	165.6
September	167.4
December	169.5

combinations could be made, as, for example, the National Industrial Conference Board increases for the separate items and the Bureau of Labor Statistics weights, which produces a consistently higher series than the regular National Industrial Conference Board numbers.

Enough has been presented to indicate that weighting alone is important as an explanation of the differences between the index numbers of the cost of living of the National Industrial Conference Board and the Bureau of Labor Statistics mainly as the weighting reflects the kind and quality of food consumed. A further analysis of the goods and services entering into the basic budget on which increases are based is therefore in order, especially in view of the fact that the major items themselves show considerable differences in price increases as between the two series.

Goods and Services

The goods and services for which families spent their incomes in 1914 and in 1918 are reflected in the distribution of total expenditures not only among the major items but also within these major groups themselves. Neither the National Industrial Conference Board nor the Bureau of Labor Statistics, however, attempts to collect prices for a complete budget, but instead uses a set of samples for each item. A comparison of the details of these is necessarily a comparison not only of the consumption habits of the families whose expenditures constituted the basic budget but also of the ideas of the creators of the index numbers as to which selection most adequately represents the major items as a whole. Still, since the latter inevitably is based to a considerable extent on the former, a comparative analysis of the basic samples may well throw considerable light on the present problem.

Food: The retail food price index number of the Bureau of Labor Statistics is also used by the National Industrial Conference Board, hence the items and weights are identical.

Housing: No standard of housing is specified by the Bureau of Labor Statistics; the National Industrial Conference Board specifies four or five rooms and bath, unheated. Both are supposed to be accommodations such as are ordinarily occupied by the families of wage earners. The difference in the index numbers for these items, quite marked, as an examination of Chart 3 shows, is not due, so far as known, to differences in standards of housing but to differences in standards of sampling, and in combining increases noted. The Bureau of Labor Statistics obtains the rent, on each index number date, of specified pieces of property; the National Industrial Conference Board obtains a general estimate of average rents on a wide variety of property.

The first method leaves out of account two circumstances which may be of importance in measuring rent changes. The first is that, while the same house may stay in the same place from year to year and may be readily identified, most houses depreciate in desirability with the years, so that actually they do not provide the same grade of accommodations in any year as they did five or ten years before. This fact ordinarily is reflected in the rent, and the charges for such a house under normal circumstances could not be expected to advance so far as the rent necessarily paid at present for housing which would provide the same type of accommodation as the first house originally supplied five or ten years before. Moreover, in recent years, as real estate agents originally reporting rents have dropped out and new houses have been included to fill in the gaps caused by inability to trace the landlord of the old or because the owner himself is now the occupant, the new property has not been considered in the index of the Bureau of Labor Statistics until rents in two periods have been secured. These new houses probably started with relatively high rents and the increases since may not have been so great as on the older property, though the rents themselves, when first noted, may have been much higher. Another circumstance tending to minimize the rent increases as reported by the Bureau of Labor Statistics is that the method of sampling often necessarily leaves out of account property which changes owners frequently, because of the limitations on the possibility of tracing the agent. These changes in landlords and the speculative operations involved have sent many rents skyrocketing in recent years, but in the nature of things little of this influence would appear in the figures secured by the Bureau of Labor Statistics.

The National Industrial Conference Board rent index is made on quite a different basis. The method of general estimates is designed to take into account every type of house, old and new, and every type of landlord, including the speculators whose ownership is nominal but whose presence in the real estate field produces a constant change of agents. This method may tend to keep the rent increase high, since it is based on the going rate for property in use by wage earners at specified points of time and may therefore reflect to some extent a slowly changing standard. This is to be contrasted with the Bureau of Labor Statistics method, which seems to reflect a depreciating standard and consequently smaller rent increases.

The Bureau of Labor Statistics was of the opinion several years ago that, due to the method of sampling, their rent indexes for the separate cities might possibly be somewhat too low. A test made in Washington, D. C., in 1920, by following up property which had been dropped from the lists of the agencies ordinarily reporting, showed an increase of 15% instead of 10% in the index.[1] After that, efforts were made to follow pieces of property through until lost track of, but the chain system of computing the number apparently has never culminated in so large an average increase as that shown by the figures of the National Industrial Conference Board.

Clothing: The index number of the United States Bureau of Labor Statistics for clothing is based on quotations for 71 separate items, of which 35 constitute all the year round clothing, 14 are priced only in the summer, 17 only in the winter, and 5 relate to shoe repairing. This is not a complete clothing outfit, but is supposed to represent changes in the cost of a complete allowance. In combining these items into clothing budgets, weights have been used since June, 1920; prior to that date, the unweighted averages were compared. The weights are based on the consumption needs of a man, a boy of twelve years, a woman and a girl of six.[1] Part of the clothing for females is estimated on the basis of goods purchased ready made; 38½ yards of cotton yard goods and three-quarters of a yard of wool serge are, however, included. The clothing budget of the National Industrial Conference Board is based on quotations for 21 articles of wearing apparel for a man and a woman. All of the articles are assumed to have been purchased ready to wear, and they are combined in accordance with consumption needs. Changes in the cost of clothing for a man and a woman are supposed to represent changes in the cost of clothing for the entire family.

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[1] Statement from the Bureau, September, 1920.

The fundamental differences between the two series, therefore, are (a) difference in the number of persons whose clothing needs form the basic budget; (b) difference in the number of articles priced; (c) relative quantities of yard goods and made-up garments included; (d) possible differences in standards of quality; (e) differences between weighted and unweighted numbers. Of these differences between the two series, the most significant seems to be that, in place of made-up waists, aprons and dresses in the National Industrial Conference Board clothing budget, the cotton yard goods of which they are supposed to be fashioned at home are included by the Bureau of Labor Statistics.

In July, 1920, when, according to the National Industrial Conference Board index, clothing as a whole was 166% above the pre-war level,[2] percale was 460% higher, gingham, 333.5%; voile, 163.6% and serge, 187.6%.[3] In June of that year the United States Bureau of Labor Statistics index for clothing was 187.5% above the pre-war level.[1] The culmination of the rise in clothing prices at an earlier date in the National Industrial Conference Board series than in that of the Bureau of Labor Statistics is almost certainly more apparent than real, due to the fact that for the latter no data are available regarding the price movement from December, 1919 to June, 1920. By interpolating in the National Industrial Conference Board series the figures collected on a more limited basis each month, it is seen that clothing prices were even higher in April than in March, after which the fall was rapid. A more significant series for comparison with that of the Bureau of Labor Statistics is that of the Massachusetts Commission on the Necessaries of Life, since this clothing budget likewise contains a considerable allowance of yard goods.[2] According to this series,[3] a peak of 205.5% increase in clothing prices was reached in April, 1920, dropping to 188.4% in June, when the Bureau of Labor Statistics increase was 187.5%. It is quite probable, therefore, that if figures were available for the months between December, 1919 and June, 1920, a far higher point would have been recorded in the spring of 1920 in the Bureau of Labor Statistics clothing series than was actually found in June and that the decline from the peak would have been much more precipitate than that which appears after June.

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[1] Clothing for a child of two was priced originally, but was later dropped from the budget because of the difficulty of pricing comparable goods.

[2] See Table 3 of this volume.

[3] See Table 16 of this volume.

On the other hand, it is possible that yard goods and made-up garments did not follow their expected trends in 1920;[4] that the so-called buyer's strike was a mere abstinence from purchasing goods ready to wear and a substitution of home dressmaking. Color is lent to this theory by the fact that some cotton goods prices were higher in July than in March, and that the decline of those prices which fell was less precipitate than the decline in the prices of garments made from these materials.[5]

Moreover, cotton yard goods prices, while they had a greater height from which to fall, never went so low, relatively, as the prices of made-up garments.[1] Thus, from the winter of 1921 to the winter of 1922, when the clothing indexes in both series were at their lowest, cotton yard goods were in some instances considerably over 100% higher than before the war, while made-up garments in no instance approached such a level at that time. The National Industrial Conference Board has consistently pointed out, when there was a great difference in the advance shown in yard goods prices and the prices of made-up garments, that there would be a difference between the percentage of change in clothing prices based on a ready-to-wear budget and one in which some yard goods were included.[2]

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[1] See Table 6 of this volume. [2] See p. 92 of this volume. [3] See Table 10.

[4] The price of raw materials usually advances and falls before the prices of the articles made from them.

[5] See Table 16.

The lower peak in clothing prices and apparently earlier decline shown by the clothing index of the National Industrial Conference Board, as compared with that of the Bureau of Labor Statistics, is a reflection, therefore, of changes in the cost of an entirely ready-to-wear outfit, while that of the United States Bureau of Labor Statistics, going somewhat higher, is a reflection to some extent of the influence of the inclusion of a considerable allowance of yard goods in the budget. The fact that the Bureau of Labor Statistics index seemed to reach its peak later and fall less rapidly may probably be accounted for by the fact that figures are not available for what seems to be the period of highest clothing prices. After the winter of 1922 the index numbers for clothing of the National Industrial Conference Board and the Bureau of Labor Statistics were more nearly alike. This was in spite of the fact that cotton yard goods prices were again relatively higher than prices of some of the garments from which they were made.

The latter circumstance suggests that the relative quantity of made-up garments and yard goods included in the clothing budgets of the National Industrial Conference Board and the Bureau of Labor Statistics is not the only factor responsible for the difference between the two series. We have now to consider the other possible influences noted on page 116.

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[1] Except cotton voile, which in July, 1922, was 32% above the pre-war level while women's cotton blouses were 33% higher.

[2] See, for example, Research Report No. 9, *op. cit.*, p. 62; No. 17, *op. cit.*, p. 19; No. 25, *op. cit.*, p. 17; No. 28, *op. cit.*, p. 16; No. 30, *op. cit.*, p. 20; No. 33, *op. cit.*, p. 19. Contrast No. 39, *op. cit.*, p. 17; No. 44, *op. cit.*, p. 20; No. 49, *op. cit.*, p. 21; No. 54, *op. cit.*, p. 22; No. 57, *op. cit.*, p. 23; No. 60, *op. cit.*, p. 22; No. 63, *op. cit.*, pp. 22–23.

The number of clothing articles to be priced and the age and sex of the persons by whom they are supposed to be worn is a matter both of judgment and of expediency. If well chosen, a few articles might conceivably represent price changes of a much larger number. The principal danger lies in the fact that peculiar conditions affecting the price of any one sample might not be characteristic of the other articles it was designed to represent, and would thus affect the total more than would be the case with a total which was the average of a larger number of quotations. The extent to which this has affected the National Industrial Conference Board index number for clothing cannot be measured, in the absence of comparable figures for a complete clothing budget. It may, however, be one of the factors which has made for a difference between the two series.

There may, also, be a difference in the standards of the articles included. It has already been noted that the Bureau of Labor Statistics budget is based on a war-time standard of living, while that of the National Industrial Conference Board is based on a pre-war standard. The continuance of both price series is dependent, therefore, on the continued pricing of goods in popular demand at quite different points of time. When the Bureau of Labor Statistics series was revised in June, 1920, attempts were made to correct certain earlier quotations which apparently had been for goods not customarily purchased by wage earners, but goods "popular" in 1920 were possibly not the customary purchases of wage earners in 1914, represented in the clothing budgets of the National Industrial Conference Board.

Two other changes made in the Bureau of Labor Statistics clothing price series in 1920 are a cause of slight difference. In June, 1920, weights were used for the first time. A test of the effect of this, made in the figures for two cities, showed that the weighting tended to exaggerate slightly the increase in clothing prices as compared with what would have been the result with unweighted prices.[1] It was in June, 1920, also, that the number of articles priced for the clothing item was materially reduced. Whether or not this had any effect on the subsequent figures is not known.

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[1] Statement from the Bureau of Labor Statistics, September, 1920.

Apparently there is no question of justifying either the clothing budget of the National Industrial Conference Board or that of the Bureau of Labor Statistics. They are different and indicate better than any theoretical reasoning that not only the standard pictured but also the selection of the samples, so as to represent total consumption habits, are necessarily matters on which there is great leeway for the judgment of the investigator, and which cannot but affect the results. If it is understood that the Bureau of Labor Statistics clothing budget is based on war-time consumption and includes a quantity of yard goods and that the National Industrial Conference Board budget is based on pre-war consumption and contains no yard goods, many if not most of the differences between the two clothing series can be explained; what remains is due largely to matters of taste and judgment.

Fuel and Light: For the fuel and light item, sometimes the Bureau of Labor Statistics index has been higher; sometimes that of the National Industrial Conference Board. The Board's budget for this item is based on equal proportions of anthracite and bituminous coal, and gas and electricity in the proportion of two to one. The light items in turn are combined with the coal items in the proportion of one to two. The Bureau of Labor Statistics budget includes, in addition, wood and kerosene, but specific consumption weights have not been published for any of the several elements making up the total and were not made available. It is possible that the greater weight given coal in the National Industrial Conference Board budget sent the combined cost higher at the peak in 1920 and lower in 1923 and 1924 when coal prices were steadily falling. It is probable that light increases reported by the National Industrial Conference Board are higher than the Bureau of Labor Statistics because the former includes extra charges while the latter takes account only of net rates.

Sundries: The goods and services which make up the sundries budgets in the two series are most dissimilar of any major item[1] and any difference in their combined cost can be explained almost entirely on this basis. The trend lines of both have been almost identical from the start and the difference between them constant. Which list of items is more representative is largely a matter of taste. The National Industrial Conference Board budget allows 3% of the total for furniture and furnishings, the Bureau of Labor Statistics, 5%;[2] both list carfare, drugs and medical care, movies, newspapers, toilet articles, and tobacco. The Bureau of Labor Statistics adds dentist, spectacles, laundry, cleaning supplies, barber and telephone; the National Industrial Conference Board adds magazines, candy, insurance, contributions for church, charity and lodge dues. Evidently the cost of supplying the latter group of goods and services has increased less than the former over the pre-war level, and neither has changed to speak of since 1920. If what is missing from the Bureau of Labor Statistics sample were supplied from the National Industrial Conference Board list, and vice versa, it is possible that the two series of index numbers would be more nearly alike.

From what has been said above about the basic budgets and the goods and services included therein, it is apparent that many of the differences between the index number series of the National Industrial Conference Board and the Bureau of Labor Statistics can be explained. In addition, however, certain matters connected with contemporary prices and their collection must also be taken into account. The differences in methods of collecting rents and combining clothing prices were discussed, for the sake of clearness, when discussing the basic budgets for those items. Two other questions of more general application will now be analyzed.

METHOD OF COLLECTING AND COMBINING PRICE DATA

Localities Covered

In 1924 the index number of the cost of living in the United States constructed by the Bureau of Labor Statistics was based on quotations secured in 32 cities, aggregating a total population of 21,071,011 in 1920, except for the food index, for which 51 cities, with 24,466,309 population were covered. The National Industrial Conference Board number is based on a varying number of cities for the different major items. The average since 1920 has been 167 each for shelter, gas and carfare; 76 for clothing; 59 for coal. In November, 1924, these aggregated a population, based on the 1920 census, of 33,482,461 for rents, carfares and gas charges; 27,140,568, for clothing, 25,976,828 for fuel. Changes in the cost of other sundries items, such as magazines, insurance, candy or tobacco, while based on a few reports, are of application to the country as a whole.

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[1] See pp. 54 and 77 of this volume.

[2] In 1918 furniture prices were up over 100% so 5% in that year was not so liberal an allowance as 3% in 1914. See pp. 109 ff. of this volume for discussion of war-time versus pre-war weightings.

This number of cities has not always been included, however, in either series.[1] Through December, 1917, the Bureau of Labor Statistics index is based on 18 shipbuilding centers; in December, 1918, 13 more industrial cities were added; in December, 1920, Washington, D. C. was included. The National Industrial Conference Board practically completed its basis in 1920, also. The places included differ considerably as between the two series, but both include the largest cities. The average population covered by the National Industrial Conference Board reports is several millions greater than that covered by the Bureau of Labor Statistics.

In some respects, the population coverage is not so important in determining the adequacy of the sample as other considerations. Geographical location of the cities apparently affects changes in the cost of coal and to some extent those in the cost of food; local conditions are more exclusively responsible for rent changes. Clothing price changes, on the other hand, are more nearly a matter of individual buying and selling policies than of geographical location,[2] but local industrial conditions in some instances seem to have played an important part in the increase or decrease of prices.

The purposes of the two series should be kept in mind in any comparison of their coverage. The Bureau of Labor

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[1] Except that for food, prices were used for all of the cities in which they were secured.

[2] It is of interest that, according to the Bureau of Labor Statistics series, the cost of clothing increased more in New York, the clothing center of the country, than in any other single locality.

Statistics is interested primarily in ascertaining changes in cost in the individual cities and secondarily puts these together for the country as a whole. The National Industrial Conference Board does not construct an index for separate cities, except for rents and coal prices, which are so largely local matters. Thus, the combination of a few reports from a large number of centers, of varying sizes, geographical location and industrial conditions, is to be contrasted with more reports in some instances, from a lesser number of centers of more uniform location and composition.

The effect of this appears in the average for the country as a whole. The cities included by the Bureau of Labor Statistics are mostly the large industrial centers of the country, which were built up greatly during the war, and in which war-price inflation has carried over into peace times to a considerable extent. In Detroit, for example, the increase in the total cost of living, according to the Bureau of Labor Statistics figures, was 136% in June, 1920, when for the country as a whole, according to the same figures, it was 110.2%.[1] In Buffalo it was 121.5%; in Cleveland, 120.3%; Norfolk, 122.2%. In December, 1924, when the average increase for the country as a whole was 67.5%, the increase in Detroit was 82.2%; Buffalo, 77.8%; Cleveland, 78.1%; Norfolk, 72.1%. Except for Norfolk, these were all higher in December, 1924, than the increase for any other city reporting; and of the twelve cities which had been above the average for the country as a whole in June, 1920, eleven were still above in December, 1924, with Los Angeles added. Among the seven below in December, 1924, six were below in June, 1920, with Boston added.

Among the 13 cities added to the series in December, 1917, not one in June, 1920, showed an increase so great as the average for the country as a whole, based on 18 shipbuilding centers only, but in December, 1924, three showed an increase since December, 1917, greater than for the country as a whole. In other words, since the Bureau of Labor Statistics index number up to December, 1917, was based on 18 cities where for the most part the increase in the cost of living was greater than for the country as a whole,[1] and the method of constructing the number involves a chain system whereby to increases already ascertained the next succeeding increase or decrease is applied, it is evident that the effect of these early large increases would be carried through the series, unless the downward movement in these 18 cities was more significant and marked than in the country as a whole.

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[1] Computed by dividing the index number based on 1913 by the index number for December, 1914.

For the National Industrial Conference Board figures, on the other hand, quotations have been collected from a larger number of cities and towns of every type, many of which have been affected less by scarcity conditions than have the industrial cities. It is obvious that in an average based on 32 large cities the abnormal war increases would have far greater weight than in one made up of several times that number of smaller ones, and that the inclusion of all kinds of localities in all parts of the country would give a somewhat different picture than 32 industrial cities only.

The index of the cost of living for the country as a whole, constructed by the United States Bureau of Labor Statistics, is thus in reality an index for the industrial cities; that of the National Industrial Conference Board takes in a greater variety of conditions as regards both size and industrial characteristics, and is not so exclusively an urban index.

Investigation by Questionnaire or Special Agent

Forty-three and five-tenths per cent of the data used by the Bureau of Labor Statistics in making up its cost of living index numbers are secured through questionnaires by mail; practically 100% of the National Industrial Conference Board's data are thus assembled. In view of the foregoing analysis, which shows that when both are reduced as nearly as possible to an identical basis much of the difference between the two series disappears, and that what is left is related largely to differences in the samples, it seems scarcely necessary to attribute to the method of collecting the data any significant influence on the results obtained. The remarkable similarity of the trend lines not only for the cost of living as a whole, but for each major item, and the fact that in a matter in which exact measurement can never be possible the percentages of change are so similar, is more striking than the differences between them. There is no reason to suppose that for its particular coverage each is not as nearly correct as possible.

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[1] *Monthly Labor Review*, October, 1919, pp. 5, 6.

The Conference Board has found in its experience with a number of local investigations of the cost of living, made by field agents, that procuring information in this way likewise has certain dangers. For example, the agent arrives at a time when the merchandise manager is very busy. He asks that the schedule be left; or he hurriedly disposes of the agent to buyers or salespeople who, in turn, are busy; or he refuses to have the schedule filled out at all. The agent may or may not appraise the value of the goods priced and its comparability with quotations previously secured. These circumstances may result in exactly the same bias, if there be any, as in the questionnaire, through inaccurate or incomplete quotations which the agent may feel called on to adjust to suit the requirements. Such an experience, while not necessarily universal, may be frequent. Personal inquiry insures nothing regarding the maintenance of a comparable standard of merchandise, and leaves much to the discretion of the agent. Where, as happens in the Bureau of Labor Statistics series, the same agent does not visit the same community on two successive dates, there is, of course, opportunity for a considerable fluctuation in standard.

While collecting data by mail is far from infallible, it has the advantage of permitting the merchant to fill in the required information at his leisure, and it puts upon him the responsibility for seeing that standards of comparability are maintained. Its greatest advantage is that it permits the collection of data at more frequent intervals, over a much wider area, than is possible where special agents have to be employed.[1] A monthly index of any extensiveness could hardly be attempted except through questionnaires. Although the quarterly index of the Bureau of Labor Statistics is based on only 32 cities nearly half of the information is collected by questionnaire.[2] Whether, therefore, questionnaires or agents are used in a cost of living survey is largely a practical question. To the extent that standardization is possible, questionnaires may well be used; where judgment or discretion is involved the choice seems to lie between trusting to the decision of a special agent or of the merchant.

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[1] Except for local surveys by a local organization.

[2] The various monthly indexes of the Bureau of Labor Statistics are all made up from data collected by questionnaire.

SUMMARY

The differences between changes in the retail price level in the United States as shown by the index numbers of the cost of living computed by the National Industrial Conference Board and by the United States Bureau of Labor Statistics respectively, in the United States tend to disappear when both are reduced to the same basis. The most important reasons for the existing differences are that the National Industrial Conference Board series is based on a pre-war budget and pre-war consumption and reflects, as well as may be possible in a single average, conditions in the country as a whole, whereas the Bureau of Labor Statistics series is based on a war-time budget and war-time consumption and is more exclusively an urban index, since a far larger proportion of the total localities covered are the largest cities in the country.

Another important reason for the difference between the two series is in the choice of the samples used to measure the change in cost of the major items making up the total cost of living. In all but the food group, which is identical in both series, the samples are quite different. While the trend of costs for clothing and for sundries is much the same, the percentages of change themselves differ throughout the series. The rent and fuel and light curves, while not so uniform in their trend, are not radically different. These circumstances lend a considerable degree of confidence to both series, and strengthens the belief that each is substantially correct. What samples are to be chosen or how prices of them are to be collected and combined are largely matters of judgment and expediency. The outstanding fact is that an index number of the retail price level can be constructed with a fair degree of accuracy and may be used with a fair degree of confidence. Which series is adopted depends, of course, on the purposes which are to be served.

CHAPTER VI

CHANGES IN THE COST OF LIVING, 1914 TO 1925

IN THE earlier chapters it was shown that, considering the wide diversity of bases and methods in making up the more important American index numbers of the cost of living, there is a striking similarity in results when they are reduced to a common basis. Although in some cases the samples taken are small, the broad coverage of the National Industrial Conference Board's investigations affords a picture of relative conditions the country over, based on pre-war standards and taking into account large and small communities in all parts of the country, with a wide variety of industrial characteristics. The more limited index number of the United States Bureau of Labor Statistics, based on costs in 32 large cities, gives a picture of urban conditions which to some extent still reflect the abnormal industrial expansion during the war period and immediately thereafter. The index number of the Massachusetts Commission on the Necessaries of Life also reflects conditions which are predominantly urban, but which were perhaps not so greatly affected by the war inflation because of the restraining effect on prices exercised by the commission.

In Chapter II the make-up of the index numbers of the National Industrial Conference Board was described in detail; in Chapter V these numbers were compared with the index numbers of the cost of living of the United States Bureau of Labor Statistics and it was shown that as a measure of conditions the country over the National Industrial Conference Board numbers were very fairly representative of the movement of the retail price level based on the maintenance of pre-war standards, especially as related to the purchases of working class families. In the present chapter, the changes in the cost of living since July, 1914, will be measured by the National Industrial Conference Board's indexes, with reference particularly to their component elements. The latest information available before going to press is here included, for the sake of completeness; but attention is centered on the changes during the ten-year period from July, 1914 to July, 1924.

The General Trend

Since July, 1921, the cost of living as a whole has fluctuated scarcely more than ten points up or down from the low point of the increase since July, 1914, reached in August, 1922. Except for seasonal changes, food prices since March, 1922 have remained at a fairly even level, with a tendency upward for the first two years and a decline since November, 1923; clothing prices, likewise, after declining to their lowest point since 1914 in the spring and summer of 1922, again showed upward tendencies of a persistent character, with a falling back in July, 1924. Sundries and fuel and light costs declined from a high point reached in November, 1920, after which they fluctuated from month to month; rents, on the whole, after declining for a short period in 1921 and 1922, advanced considerably in 1923 and 1924.

This maintenance of a fairly even level of prices after 1922 followed the most remarkable rise in retail prices of which there is any record in this country.[1] From 1914 until the entry of the United States into the World War in 1917, the movement was not remarkable, but the momentum given by that event sent many prices soaring sufficiently to reach, in November, 1918, a peak of 65% increase above July, 1914. After the Armistice, food and clothing prices fell sufficiently to bring the total cost of living down a little, but this recession was only temporary and preliminary to a marked rise within the next year. By the summer of 1920, the average cost of living in the United States was 104.5% above the pre-war level; clothing and food prices were at even greater heights, but the slow advance in rents and in the cost of fuel and light and sundries served to keep down the increase in the balanced price level as a whole. From the peak in 1920 to the summer of 1921 the decline in retail prices was even more rapid than the advance the preceding year, sloping off again to a new low point, in March, 1922, of 54.7% increase above July, 1914, a decline of nearly 25% from the peak.

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[1] Of course other wars have brought price inflations, but records of them on a retail basis do not exist.

SHELTER

Rents, according to pre-war standards, required something less than 20% of the total annual outlay for living by average working men's families. As will be pointed out later,[1] this proportion has changed considerably from year to year in the decade from 1914 to 1924, taking now less, now more as rents and prices of other goods and services have shifted their relative positions.

While prices of most items entering into the cost of living are affected only to a slight extent by local factors, being fixed in a national or even international market, the course of house rents is dependent almost entirely on local conditions. Without legal regulation, the play of the forces of supply and demand is much more direct and immediate in the adjustment of house rents than in any other major item of family expenditure. Whether houses are relatively plentiful or relatively scarce depends not only on the growth or decline of the local population, which in turn is directly related to the prosperity or depression of local industries, but also upon circumstances connected with building construction. In this the local tax rate and local building trade wages as well as the supply and cost of building materials are the most important considerations.

The local character of the course of rents is clearly seen from examination of the figures in Table 14. In some cities the influence of the growth of population due to war industries showed itself early in large increases; in others it was not until the post-war industrial activity brought an unusual demand for housing that rents moved to high levels. In some cities the industrial depression of 1921 brought a decline, others were not so affected and rents continued to mount upward. Still another type of locality felt no special effect of war or post-war conditions, beyond the fact that

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[1] See pp. 184, 185, of this volume.

Table 14: Estimated Average Percentages of Change in 1914 and Intermediate Dates

(National Industrial

	Nov., 1918	March, 1919	July, 1919	Nov., 1919	March, 1920	July, 1920	Nov., 1920	March, 1921
Akron, Ohio	10 or less	[a]	51–60	71–80	81–90	91–100	61–70	51–60
Albany, N. Y.	10 or less	[a]	31–40	31–40	31–40	51–60	51–60	61–70
Allentown, Pa.	[a]	21–30	21–30	21–30	41–50	61–70	61–70	61–70
Alliance, Ohio	[a]	[a]	11–20	11–20	21–30	41–50	51–60	31–40
Altoona, Pa.	11–20	11–20	11–20	11–20	21–30	31–40	31–40	31–40
Ann Arbor, Mich.	[a]	21–30	21–30	31–40	31–40	61–70	101–110	101–110
Appleton, Wis.	[a]	41–50	41–50	[a]	91–100	111–120	131–140	131–140
Atlanta, Ga.	*11–20*[c]	[a]	21–30	21–30	21–30	41–50	51–60	51–60
Atlantic City, N. J.	11–20	11–20	41–50	[a]	[a]	[a]	61–70	61–70
Augusta, Ga.	[a]	[a]	21–30	21–30	31–40	41–50	51–60	51–60
Baltimore, Md.	11–20	11–20	21–30	21–30	31–40	51–60	51–60	61–70
Battle Creek, Mich.	[a]	21–30	21–30	31–40	[a]	101–110	101–110	101–110
Bay City, Mich.	[a]	21–30	21–30	41–50	41–50	41–50	41–50	41–50
Bayonne, N. J.	31–40	31–40	51–60	61–70	81–90	101–110	111–120	111–120
Beaumont, Tex.	[a]	[a]	[a]	[a]	51–60	51–60	61–70	61–70
Bellingham, Wash.	[a]	21–30	21–30	61–70	61–70	61–70	81–90	71–80
Berkeley, Cal.	[a]	[a]	41–50	51–60	51–60	51–60	51–60	71–80
Bethlehem, Pa.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Billings, Mont.	10 or less	10 or less	10 or less	21–30	21–30	31–40	41–50	[a]
Binghamton, N. Y.	21–30	21–30	41–50	71–80	121–130	121–130	121–130	121–130
Birmingham, Ala.	11–20	21–30	21–30	61–70	[a]	51–60[e]	51–60[e]	51–60
Boston, Mass.	10 or less	10 or less	10 or less	11–20	31–40	31–40	41–50	51–60
Bridgeport, Conn.	[a]	21–30	21–30	21–30	21–30	31–40	31–40	31–40
Brockton, Mass.	[d]	[a]	10 or less	21–30	41–50	41–50	41–50	41–50
Buffalo, N. Y.	21–30	21–30	31–40	41–50	41–50	61–70	71–80	71–80
Butte, Mont.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Cambridge, Mass.	10 or less	10 or less	10 or less	11–20	21–30	31–40	41–50	41–50
Camden, N. J.	[a]	31–40	31–40	41–50	41–50	41–50	41–50	41–50
Canton, Ohio	41–50	41–50	61–70	81–90	101–110	111–120	111–120	71–80
Champaign, Ill.	*11–20*[c]	[d]	10 or less	11–20	11–20	21–30	21–30	21–30
Charleston, S. C.	11–20	31–40	31–40	31–40	31–40	31–40	31–40	31–40
Chattanooga, Tenn.	21–30[e]	21–30	21–30	31–40	61–70	61–70	81–90	81–90
Chester, Pa.	71–80	71–80	71–80	71–80	91–100	101–110	111–120	111–120
Chicago, Ill.	10 or less	11–20	21–30	31–40	41–50	51–60	61–70	71–80
Cincinnati, Ohio	10 or less	10 or less	11–20	11–20	21–30	31–40	41–50	41–50
Cleveland, Ohio	11–20	11–20	41–50	61–70	61–70	61–70	81–90	81–90
Clifton, N. J.	[a]	[a]	[a]	[a]	[a]	[a]	51–60	51–60
Clinton, Iowa	[a]	31–40	[a]	[a]	31–40	41–50	41–50	41–50
Columbia, S. C.	31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40
Columbus, Ohio	10 or less	21–30	21–30	31–40	31–40	51–60	51–60	51–60
Concord, N. H.	10 or less	10 or less	10 or less	11–20	21–30	31–40	51–60	51–60
Council Bluffs, Ia.	[a]	[a]	[a]	21–30	[a]	41–50	41–50	51–60
Covington, Ky.	[a]	10 or less	[a]	[a]	21–30	21–30	41–50	41–50
Dallas, Tex.	11–20	11–20	11–20	21–30	41–50	41–50	51–60	51–60
Danville, Ill.	[a]	[a]	41–50	61–70	61–70	71–80	71–80	71–80
Davenport, Ia.	21–30	21–30	21–30	41–50	51–60	61–70	61–70	[a]
Dayton, Ohio	[a]	21–30	21–30	21–30	31–40	41–50	41–50	41–50
Denver, Col.	11–20	21–30	41–50	71–80	71–80	91–100	91–100	91–100
Des Moines, Ia.	11–20	11–20	31–40	31–40	51–60	61–70	91–100	91–100
Detroit, Mich.	31–40	31–40	31–40	61–70	61–70	81–90	81–90	71–80
Dubuque, Ia.	[d]	[d]	[d]	10 or less	41–50	41–50	41–50	41–50
Duluth, Minn.	10 or less	21–30	31–40	31–40	31–40	31–40	31–40	31–40
East St. Louis, Ill.	[d]	[a]	21–30	21–30	21–30[e]	[a]	31–40	31–40
Elizabeth, N. J.	[a]	[a]	31–40	41–50	71–80	91–100	101–110	101–110
Elkhart, Ind.	21–30	21–30	21–30	21–30	41–50	51–60	51–60	51–60
Elmira, N. Y.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
El Paso, Tex.	*10 or less*[c]	*10 or less*[c]	[d]	10 or less	11–20	21–30	31–40	41–50
Elyria, Ohio	[d]	[d]	10 or less	41–50	41–50	61–70	71–80	71–80
Erie, Pa.	31–40[e]	31–40	31–40	51–60	51–60	61–70	61–70	61–70
Evansville, Ind.	[d]	11–20	11–20	31–40	31–40	41–50	51–60	51–60
Everett, Wash.	10 or less	10 or less	11–20	21–30	21–30	21–30	21–30	21–30
Fall River, Mass.	[a]	[a]	11–20	11–20	21–30	21–30	31–40	31–40
Fayetteville, N. C.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	51–60
Flint, Mich.	51–60	[a]	61–70	71–80	101–110	121–130	71–80	31–40
Fort Wayne, Ind.	21–30	21–30	21–30	31–40	41–50	61–70	61–70	61–70
Fort Worth, Tex.	[a]	41–50	41–50	61–70	71–80	71–80	71–80	71–80
Gary, Ind.	21–30	21–30	21–30	21–30	21–30	41–50	61–70	61–70
Geneva, N. Y.	10 or less	10 or less	10 or less	21–30	21–30	21–30	21–30	21–30

[a] No report.

[c] Decrease.

[d] No change.

[e] Corrected figure, based on better information than that originally available. See footnote 1, p. 45.

RENTS OF WAGE EARNERS' HOUSES IN SPECIFIED CITIES, BETWEEN JULY, TO NOVEMBER, 1924, INCLUSIVE

Conference Board)

July, 1921	Nov., 1921	March, 1922	July, 1922	Nov., 1922	March, 1923	July, 1923	Nov., 1923	March, 1924	July, 1924	Nov., 1924
41–50	31–40	31–40	41–50	41–50	61–70	71–80	71–80	71–85	71–80	71–80
61–70	61–70	71–80	71–80	71–80	121–130	121–130	121–130	121–130	121–130	121–130
61–70	61–70	61–70	61–70	81–90[b]	101–110	101–110	101–110	101–110	101–110	101–110
31–40	31–40	21–30	21–30	21–30	21–30	21–30	31–40	41–50	41–50	21–30
31–40	31–40	31–40	31–40	31–40	41–50	51–60	61–70	61–70	61–70	61–70
101–110	101–110	101–110	101–110	[a]	[a]	[a]	[a]	[a]	[a]	[a]
131–140	[a]	131–140	[a]	191–200	191–200	141–150	101–110	101–110	101–110	101–110
51–60	51–60	51–60	51–60	51–60	41–50	41–50	41–50	41–50	31–40	31–40
61–70	61–70	61–70	61–70	61–70	61–70	71–80	71–80	71–80	71–80	71–80
[a]	51–60	41–50	31–40	31–40	31–40	31–40	41–50[b]	41–50	21–30	21–30
61–70	61–70	51–60	51–60	51–60	51–60	50–60	51–60	51–60	71–80	71–80
101–110	101–110	101–110	101–110	[a]	101–110	101–110	[a]	[a]	[a]	[a]
41–50	21–30	21–30	21–30	[a]	10 or less[c]	*10 or less*[c]	*10 or less*[c]	*10 or less*[c]	*10 or less*[c]	10 or less[c]
111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	111–120	141–150
61–70	61–70	61–70	61–70	91–100	91–100	91–100	91–100	91–100	81–90	81–90
41–50	21–30	11–20	11–20	21–30	31–40	31–40	61–70	91–100	91–100	91–100
71–80	71–80	61–70	61–70	61–70	81–90	81–90	111–120[b]	111–120	111–120	111–120
[a]	[a]	[a]	[a]	[a]	[a]	[a]	51–60	81–90	[a]	81–90
41–50	21–30	11–20	10 or less	*10 or less*[c]	*11–20*[c]	*11–20*[c]	*21–30*[c]	*31–40*[c]	*41–50*[c]	41–50[c]
121–130	121–130	131–140	131–140	121–130	121–130	121–130	161–170	161–170	151–160	131–140
51–60	41–50	21–30	21–30	11–20	21–30	21–30	31–40	31–40	31–40	31–40
61–70	61–70	61–70	71–80	71–80	71–80	81–90	81–90	81–90	81–90	91–100
31–40	31–40	21–30	21–30	21–30	21–30	11–20	11–20	11–20	11–20	11–20
31–40	31–40	31–40	51–60	51–60	51–60	51–60	71–80	81–90	81–90	91–100
71–80	71–80	71–80	71–80	71–80	71–80	81–90	91–100	91–100	111–120	111–120
[a]	*21–30*[c]	*21–30*[c]	*21–30*[c]	*21–30*[c]	[a]	[a]	*21–30*[c]	*21–30*[c]	*41–50*[c]	41–50[c]
41–50	41–50	41–50	41–50	51–60	41–50	51–60	51–60	61–70	61–70	61–70
41–50	41–50	41–50	41–50	51–60	61–70	71–80	91–100	101–110	101–110	101–110
51–60	41–50	31–40	31–40	31–40	51–60	71–80	71–80	81–90	81–90	71–80
31–40	31–40	31–40	31–40	31–40	61–70	61–70	61–70	111–120	111–120	[a]
31–40	31–40	31–40	31–40	31–40	21–30	11–20	11–20	11–20	11–20	11–20
71–80	71–80	51–60	51–60	61–70	61–70	71–80	71–80	71–80	71–80	71–80
111–120	91–100	[a]	51–60	81–90	101–110	131–140	91–100[b]	131–140	131–140	131–140
71–80	71–80	71–80	71–80	71–80	91–100	101–110	101–110	121–130	111–120	111–120
41–50	41–50	41–50	41–50	51–60	51–60	71–80	81–90	81–90	81–90	101–110
71–80	61–70	51–60	51–60	61–70	61–70	81–90	81–90	81–90	81–90	81–90
51–60	61–70	51–60	21–30	21–30	61–70	61–70	71–80	71–80	[a]	[a]
41–50	41–50	41–50	41–50	41–50	41–50	71–80	141–150	[a]	141–150	141–150
31–40	31–40	21–30	21–30	21–30	21–30	21–30	21–30	21–30	21–30	21–30
61–70	61–70	61–70	61–70	61–70	81–90	91–100	111–110	111–120	111–120	111–120
51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60
51–60	41–50	41–50	41–50	41–50	[a]	[a]	81–90[b]	121–130	101–110	81–90
41–50	61–70	61–70	61–70	61–70	61–70	81–90	101–110[b]	101–110	101–110	101–110
51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60
71–80	71–80	71–80	41–50	21–30	21–30	21–30	61–70	61–70	61–70	61–70
31–40	31–40	21–30	11–20	11–20	11–20	11–20	71–80[b]	51–60	51–60	31–40
41–50	41–50	41–50	41–50	41–50	41–50	41–50	61–70	61–70	81–90	81–90
91–100	91–100	91–100	91–100	91–100	91–100	91–100	91–100	91–100	91–100	91–100
91–100	91–100	91–100	91–100	91–100	91–100	91–100	91–100	81–90	71–80	61–70
61–70	51–60	41–50	51–60	91–100	101–110	111–120	111–120	111–120	111–120	101–110
41–50	41–50	41–50	51–60	51–60	51–60	51–60	51–60	51–60	61–70	61–70
31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40
21–30	21–30	21–30	21–30	31–40	31–40	[a]	[a]	[a]	[a]	[a]
101–110	91–100	91–100	91–100	101–110	101–110	101–110	111–120	121–130	121–130	121–130
51–60	41–50	31–40	31–40	31–40	41–50	41–50	41–50	41–50	41–50	41–50
[a]	[a]	[a]	[a]	[a]	[a]	[a]	101–110	141–150	141–150	101–110
31–40	31–40	21–30	21–30	11–20	10 or less	10 or less	10 or less	10 or less	10 or less	*10 or less*[c]
71–80	71–80	71–80	71–80	[a]	[a]	[a]	[a]	[a]	[a]	[a]
61–70	61–70	61–70	61–70	61–70	91–100	91–100	71–80[b]	81–90	91–100	81–90
51–60	61–70	61–70	61–70	91–100[b]	111–120	121–130	121–130	131–140	141–150	121–130
21–30	11–20	11–20	11–20	41–50	41–50	51–60	51–60	51–60	51–60	51–60
31–40	31–40	31–40	31–40	41–50	41–50	41–50	41–50	41–50	41–50	41–50
51–60	41–50	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
21–30	21–30	10 or less	11–20	31–40	51–60	71–80	91–100	101–110	81–90	51–60
51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	61–70	51–60	51–60
51–60	51–60	31–40	21–30	21–30	21–30	21–30	31–40[b]	11–20	11–20	11–20
51–60	31–40	11–20	11–20	21–30	41–50	61–70	71–80	91–100	91–100	91–100
21–30	21–30	21–30	21–30	21–30	81–90	121–130	121–130	121–130	121–130	121–130

[a] No report.

[b] The increase since 1914 is an adjusted figure which will not be obtained by applying the percentage of change within the last preceding four-month period to the previously reported increase since 1914.

[c] Decrease.

[d] No change.

TABLE 14: ESTIMATED AVERAGE PERCENTAGES OF CHANGE IN 1914 AND INTERMEDIATE DATES

(National Industrial

	Nov., 1918	March, 1919	July, 1919	Nov., 1919	March, 1920	July, 1920	Nov., 1920	March, 1921
Grand Rapids, Mich.	[d]	[d]	[d]	21–30	31–40	31–40	41–50	41–50
Great Falls, Mont.	[d]	[d]	[d]	10 or less	11–20	[d]	[d]	[d]
Hamilton, Ohio	[a]	[a]	[a]	[a]	[a]	41–50	51–60	51–60
Harrisburg, Pa.	[a]	[a]	11–20	21–30	31–40	41–50	51–60	51–60
Hartford, Conn.	11–20	21–30	21–30	21–30	21–30	21–30	31–40	31–40
Haverhill, Mass.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Hoboken, N. J.	[a]	[a]	31–40	31–40	[a]	[a]	41–50	61–70
Holyoke, Mass.	[a]	11–20	11–20	11–20	21–30	41–50	61–70	61–70
Hoquiam, Wash.	11–20	11–20	[a]	51–60	51–60	51–60	61–70	61–70
Houston, Tex.	[a]	[a]	11–20	21–30	31–40	51–60	61–70	61–70
Huntington, W. Va.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Indianapolis, Ind.	[d]	[d]	10 or less	10 or less	21–30	21–30	31–40	31–40
Jackson, Mich.	[a]	11–20	11–20	41–50	71–80	71–80	71–80	71–80
Jacksonville, Fla.	[a]	[a]	51–60	[a]	[a]	91–100	91–100	91–100
Jersey City, N. J.	11–20	11–20	21–30	21–30	41–50	51–60	61–70	61–70
Johnstown, Pa.	[a]	[a]	41–50	41–50	51–60	71–80	91–100	91–100
Kalamazoo, Mich.	[a]	[a]	[a]	[a]	[a]	41–50	61–70	61–70
Kansas City, Kan.	[a]	[a]	21–30	21–30	31–40	[a]	81–90	81–90
Kansas City, Mo.	[d]	[d]	21–30	31–40	31–40	51–60	51–60	51–60
Kenosha, Wis.	31–40	31–40	41–50	61–70	71–80	101–110	101–110	101–110
Knoxville, Tenn.	11–20	[a]	21–30	31–40	31–40	51–60	71–80	71–80
Lafayette, Ind.	[a]	[a]	11–20	21–30	31–40	31–40	61–70	71–80
Lancaster, Pa.	[a]	21–30	21–30	31–40	31–40	31–40	31–40	31–40
Lansing, Mich.	11–20	11–20	[a]	[a]	51–60	[a]	41–50	31–40
Lawrence, Mass.	[a]	[a]	[a]	31–40	31–40	51–60	61–70[e]	61–70
Lincoln, Neb.	10 or less	11–20	31–40	41–50	41–50	61–70	71–80	71–80
Little Rock, Ark.	[a]	*10 or less*[c]	[a]	[a]	61–70	81–90	81–90	81–90
Los Angeles, Cal.	10 or less	11–20	11–20	71–80	121–130	171–180	201–210	151–160[e]
Louisville, Ky.	10 or less	10 or less	11–20	41–50	51–60	71–80	81–90	81–90
Lowell, Mass.	21–30	[a]	31–40	51–60	61–70	61–70	81–90	81–90
Lynn, Mass.	[d]	[d]	10 or less	11–20	11–20	21–30	21–30	21–30
Macon, Ga.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Madison, Wis.	21–30	[a]	21–30	21–30	[a]	[a]	[a]	[a]
Malden, Mass.	[a]	[a]	10 or less	[a]	[a]	31–40	31–40	41–50
Manchester, N. H.	[a]	[a]	10 or less	10 or less	21–30	31–40	31–40	31–40
Massillon, Ohio	21–30	21–30	31–40	31–40	51–60	61–70	61–70	61–70
Memphis, Tenn.	*10 or less*[c]	*10 or less*[c]	11–20	11–20	11–20	41–50	51–60	51–60
Miles City, Mont.	[a]	10 or less	[a]	10 or less	10 or less	10 or less	10 or less	[a]
Milwaukee, Wis.	11–20	11–20	21–30	41–50	71–80	71–80	81–90	81–90
Minneapolis, Minn.	10 or less	10 or less	11–20	11–20	21–30	21–30	31–40	31–40
Mobile, Ala.	[a]	[a]	11–20	11–20	21–30	31–40	71–80	71–80
Nashville, Tenn.	[d]	[d]	[d]	10 or less	21–30	31–40	51–60	51–60
Newark, N. J.	11–20	[a]	31–40	41–50	51–60	61–70	61–70	61–70
New Bedford, Mass.	11–20	11–20	21–30	41–50	51–60	51–60	61–70	61–70
New Britain, Conn.	11–20	[a]	21–30	41–50	61–70	61–70	61–70	61–70
New Haven, Conn.	11–20	11–20	11–20	31–40	51–60	51–60	61–70	61–70
New Orleans, La.	10 or less	10 or less	10 or less	31–40	41–50	51–60	51–60	51–60
New York, N. Y.	11–20	21–30	21–30	41–50	61–70	71–80	71–80	71–80
Niagara Falls, N. Y.	[a]	[a]	21–30	[a]	31–40	31–40	21–30	21–30
Norfolk, Va.	11–20	21–30	21–30	31–40	61–70	61–70	71–80	71–80
Oakland, Cal.	11–20	21–30	31–40	31–40	41–50	41–50	51–60	51–60
Oklahoma City, Okla.	[a]	[a]	41–50[e]	41–50[e]	51–60	101–110	101–110	101–110
Omaha, Neb.	[d]	31–40	31–40	61–70	[a]	71–80	71–80	71–80
Pasadena, Cal.	[d]	[d]	31–40	31–40	71–80	111–120	151–160	[a]
Passaic, N. J.	[a]	[a]	21–30	51–60	81–90	101–110	101–110	[a]
Paterson, N. J.	21–30	31–40	31–40	61–70	71–80	81–90	81–90	81–90
Pawtucket, R. I.	[a]	[a]	21–30	21–30	[a]	[a]	[a]	[a]
Peoria, Ill.	[a]	[a]	11–20	11–20	21–30	31–40	31–40	31–40
Philadelphia, Pa.	11–20	11–20	11–20	11–20	31–40	51–60	51–60	51–60
Phoenix, Ariz.	[d]	[d]	10 or less	10 or less	51–60	51–60	71–80	71–80
Pittsburgh, Pa.	11–20	21–30	21–30	31–40	51–60	61–70	61–70	71–80
Port Huron, Mich.	31–40	31–40	31–40	31–40	41–50	71–80[e]	101–110	101–110
Portland, Me.	21–30	[a]	11–20	11–20	21–30	21–30	21–30	21–30
Portland, Ore.	51–60	51–60	71–80	71–80	71–80	71–80	91–100	91–100
Portsmouth, Va.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Providence, R. I.	10 or less	10 or less	11–20	11–20	21–30	21–30	21–30	21–30
Pueblo, Col.	[a]	[a]	51–60	51–60	51–60	51–60	71–80	71–80
Quincy, Ill.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]

[a] No report. [c] Decrease. [d] No change.

[e] Corrected figure, based on better information than that originally available. See footnote 1, p. 45.

RENTS OF WAGE EARNERS' HOUSES IN SPECIFIED CITIES, BETWEEN JULY, TO NOVEMBER, 1924, INCLUSIVE—(*Continued*)

Conference Board)

July, 1921	Nov., 1921	March, 1922	July, 1922	Nov., 1922	March, 1923	July, 1923	Nov., 1923	March, 1924	July, 1924	Nov., 1924
41–50	41–50	71–80	71–80	91–100	91–100	91–100	111–120[b]	111–120	111–120	111–120
[d]	*11–20*[c]	*11–20*[c]	*11–20*[c]	[a]	*10 or less*[c]	*10 or less*[c]	[a]	[a]	11–20	[a]
51–60	41–50	41–50	21–30	21–30	21–30	51–60	51–60	51–60	51–60	51–60
51–60	51–60	51–60	51–60	91–100[b]	91–100	121–130	101–110[b]	111–120	111–120	111–120
31–40	31–40	21–30	21–30	21–30	21–30	21–30	21–30	41–50	41–50	61–70
[a]	[a]	[a]	[a]	[a]	[a]	[a]	81–90	81–90	71–80	61–70
61–70	61–70	61–70	61–70	81–90[b]	91–100	91–100	111–120	111–120	111–120	111–120
61–70	61–70	61–70	61–70	81–90	91–100	111–120	131–140	131–140	141–150	141–150
41–50	31–40	41–50	51–60	71–80	71–80	91–100	91–100	91–100	91–100	91–100
61–70	61–70	61–70	51–60	51–60	51–60	51–60	51–60	51–60	51–60	41–50
[a]	[a]	[a]	[a]	[a]	[a]	[a]	41–50	41–50	41–50	31–40
31–40	31–40	31–40	41–50	41–50	41–50	41–50	61–70[b]	61–70	61–70	51–60
71–80	41–50	[a]	31–40	31–40	31–40	81–90	81–90	81–90	81–90	81–90
61–70	61–70	41–50	41–50	71–80[b]	51–60	41–50	51–60[b]	71–80	71–80	61–70
61–70	61–70	71–80	71–80	91–100	101–110	101–110	131–140	131–140	131–140	131–140
91–100	91–100	91–100	91–100	121–130[b]	121–130	121–130	141–150	151–160	181–190	191–200
31–40	[a]	31–40	31–40	61–70	61–70	61–70	71–80	91–100	91–100	91–100
81–90	81–90	81–90	81–90	81–90	91–100	111–120	111–120	111–120	111–120	91–100
41–50	41–50	41–50	41–50	41–50	41–50	41–50	41–50	41–50	41–50	41–50
71–80	81–90	81–90	81–90	81–90	111–120	111–120[e]	111–120	111–120	111–120	161–170
71–80	71–80	71–80	71–80	91–100	91–100	91–100	91–100	91–100	91–100	81–90
71–80	71–80	71–80	71–80	71–80	71–80	111–120	111–120	131–140	131–140	131–140
31–40	21–30	21–30	21–30	21–30	21–30	51–60	71–80	101–110	101–110	111–120
31–40	[a]	61–70	61–70	61–70	61–70	[a]	[a]	71–80	71–80	71–80
61–70	61–70	61–70	71–80	71–80	71–80	[a]	121–130	[a]	[a]	[a]
71–80	71–80	61–70	51–60	51–60	51–60	51–60	51–60	61–70	51–60	31–40
71–80	71–80	71–80	51–60	51–60	31–40	31–40	31–40	31–40	61–70	61–70
121–130	131–140	131–140	121–130	121–130	121–130	141–150	171–180	171–180	161–170	161–170
81–90	81–90	81–90	81–90	101–110	101–110	121–130	121–130	141–150	141–150	141–150
91–100	91–100	91–100	91–100	101–110	131–140	131–140	131–140	121–130	121–130	111–120
21–30	21–30	21–30	21–30	41–50	71–80	71–80	71–80	71–80	81–90	51–60
[a]	[a]	[a]	[a]	[a]	[a]	[a]	51–60	51–60	51–60	51–60
[a]	[a]	[a]	[a]	[a]	[a]	[a]	61–70	61–70	71–80	61–70
51–60	51–60	51–60	51–60	51–60	51–60	61–70	61–70	61–70	61–70	61–70
31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40	41–50	41–50	41–50
61–70	61–70	[a]	61–70	[a]	[a]	[a]	71–80[b]	111–120	101–110	101–110
51–60	51–60	51–60	41–50	41–50	41–50	41–50	51–60	51–60	51–60	51–60
11–20	11–20	[d]	*11–20*[c]	*11–20*[c]	*11–20*[c]	*10 or less*[c]	[d]	[d]	*10 or less*[c]	11–20[c]
81–90	81–90	81–90	81–90	81–90	111–120	121–130	121–130	121–130	121–130	111–120
31–40	31–40	31–40	31–40	41–50	41–50	41–50	51–60[b]	51–60	51–60	41–50
51–60	41–50	41–50	31–40	31–40	31–40	31–40	21–30	21–30	21–30	21–30
51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60
61–70	61–70	61–70	71–80	71–80	71–80	81–90	91–100	91–100	91–100	91–100
61–70	61–70	61–70	61–70	61–70	61–70	61–70	61–70	61–70	61–70	61–70
61–70	51–60	51–60	51–60	61–70	61–70	61–70	61–70	61–70	61–70	61–70
61–70	61–70	61–70	61–70	61–70	61–70	61–70	61–70	91–100	91–100	91–100
51–60	51–60	51–60	51–60	51–60	51–60	61–70	61–70	61–70	61–70	61–70
71–80	71–80	81–90	81–90	81–90	81–90	81–90	81–90	91–100	91–100	91–100
[a]	21–30	10 or less	[a]	41–50	41–50	[a]	61–70	61–70	61–70	61–70
71–80	71–80	71–80	71–80	71–80	51–60	51–60	41–50	41–50	41–50	41–50
51–60	51–60	51–60	41–50	41–50	41–50	41–50	71–80	71–80	71–80	71–80
91–100	91–100	81–90	81–90	101–110	91–100	71–80	81–90	51–60	41–50	51–60
61–70	61–70	61–70	61–70[e]	61–70[e]	61–70[e]	61–70[e]	61–70	61–70	61–70	41–50
131–140	131–140	[a]	151–160	151–160	151–160	151–160	151–160	[a]	[a]	[a]
101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	101–110	111–120	111–120
81–90	[a]	81–90	91–100	91–100	91–100	91–100	111–120	131–140	131–140	131–140
[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
31–40	31–40	31–40	41–50	41–50	61–70	61–70	61–70	61–70	61–70	61–70
51–60	51–60	51–60	51–60	71–80	71–80	81–90	91–100	91–100	101–110	111–120
71–80	71–80	71–80	51–60	51–60	61–70	61–70	111–120	111–120	111–120	111–120
71–80	71–80	71–80	71–80	71–80	71–80	71–80	91–100	101–110	111–120	111–120
71–80	[a]	[a]	71–80	71–80	71–80	71–80	71–80	71–80	71–80	71–80
21–30	21–30	21–30	21–30	31–40	41–50	41–50	61–70	71–80	61–70	61–70
91–100	91–100	91–100	91–100	91–100	91–100	91–100	91–100	91–100	91–100	71–80
[a]	[a]	[a]	[a]	[a]	[a]	[a]	31–40	31–40	31–40	31–40
21–30	21–30	21–30	31–40	31–40	31–40	41–50	41–50	41–50	61–70	61–70
71–80	71–80	71–80	71–80	61–70	61–70	51–60	51–60	51–60	51–60	51–60
[a]	[a]	[a]	[a]	[a]	[a]	[a]	81–90	91–100	101–110	101–110

[a] No report.

[b] The increase since 1914 is an adjusted figure which will not be obtained by applying the percentage of change within the last preceding four-month period to the previously reported increase since 1914.

[c] Decrease.

[d] No change.

[e] Corrected figure, based on better information than that originally available. See footnote 1, p. 45.

TABLE 14: ESTIMATED AVERAGE PERCENTAGES OF CHANGE IN 1914 AND INTERMEDIATE DATES

(National Industrial

	Nov., 1918	March, 1919	July, 1919	Nov., 1919	March, 1920	July, 1920	Nov., 1920	March, 1921
Racine, Wis.	[a]	31–40	31–40	61–70	61–70	91–100	[a]	[a]
Reading, Pa.	10 or less	21–30	31–40	31–40	41–50	71–80	71–80	71–80
Richmond, Ind.	d	d	21–30	31–40	41–50	121–130	121–130	121–130
Richmond, Va.	10 or less	10 or less	11–20	31–40	[a]	41–50	41–50	41–50
Riverside, Cal.	[a]	10 or less	10 or less	[a]	21–30	51–60	91–100	91–100
Roanoke, Va.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Rochester, N. Y.	11–20	11–20	11–20	21–30	41–50	41–50	71–80	71–80
Rockford, Ill.	21–30	21–30	21–30	21–30	21–30	41–50	41–50	41–50
Sacramento, Cal.	11–20	11–20	11–20	31–40	31–40	31–40	71–80	71–80
Saginaw, Mich.	21–30	31–40	61–70	61–70	61–70	71–80	71–80	41–50
St. Joseph, Mo.	[a]	[a]	41–50	51–60[e]	71–80	81–90	81–90[e]	81–90
St. Louis, Mo.	10 or less	10 or less	10 or less	11–20	31–40	31–40	31–40	31–40
St. Paul, Minn.	[a]	d	d	11–20	[a]	31–40	31–40	[a]
Salt Lake City, Utah	d[e]	d	11–20	11–20	31–40	[a]	51–60	51–60
San Antonio, Tex.	11–20	21–30	21–30	31–40	41–50	51–60	81–90	81–90
San Diego, Cal.	d	d	d	10 or less	31–40	41–50	71–80	71–80
San Francisco, Cal.	d	10 or less	10 or less	10 or less	11–20	11–20	21–30	31–40
San José, Cal.	11–20	11–20	[a]	[a]	71–80	71–80	101–110	101–110
Savannah, Ga.	10 or less	[a]	10 or less	10 or less	11–20	41–50	41–50	41–50
Schenectady, N. Y.	11–20	11–20	11–20	21–30	41–50	51–60	61–70	61–70
Scottsbluff, Neb.	[a]	[a]	[a]	[a]	21–30	21–30	[a]	[a]
Scranton, Pa.	10 or less	21–30	21–30	21–30	41–50	41–50	51–60	51–60
Seattle, Wash.	31–40	[a]	31–40	61–70	61–70	61–70	61–70	61–70
Sedalia, Mo.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Sioux City, Ia.	d	11–20	31–40	81–90	110–120	121–130	121–130	91–100
Sioux Falls, S. D.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Somerville, Mass.	[a]	[a]	11–20	[a]	21–30	31–40	51–60	71–80
South Bend, Ind.	21–30	21–30	31–40	51–60	61–70	81–90	81–90	81–90
Spokane, Wash.	11–20	11–20	31–40	61–70	71–80	81–90	81–90	81–90
Springfield, Ill.	10 or less	11–20	11–20	21–30	21–30	51–60	61–70	61–70
Springfield, Mass.	21–30	21–30	21–30	21–30	41–40	41–50	41–50	51–60
Springfield, Ohio	10 or less	10 or less	10 or less	11–20	21–30	21–30	21–30	21–30
Superior, Wis.	10 or less	10 or less	10 or less	10 or less	11–20	21–30	31–40	31–40
Syracuse, N. Y.	11–20	21–30	31–40	31–40	51–60	71–80	81–90	81–90
Tacoma, Wash.	31–40	31–40	31–40	31–40	31–40	41–50	41–50	41–50
Tampa, Fla.	d	d	10 or less	31–40	51–60	[a]	61–70	61–70
Terre Haute, Ind.	21–30	21–30	21–30	21–30	31–40	51–60	111–120	111–120
Toledo, Ohio	11–20	11–20	31–40	31–40	41–50	51–60	51–60	51–60
Topeka, Kan.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Trenton, N. J.	11–20	[a]	21–30	31–40	71–80	71–80	71–80	71–80
Troy, N. Y.	[a]	[a]	[a]	31–40	31–40	31–40	31–40	51–60
Tulsa, Okla.	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Utica, N. Y.	11–20	11–20	21–30	21–30	31–40	51–60	51–60	51–60
Warren, Ohio	11–20	[a]	[a]	[a]	[a]	41–50	41–50	[a]
Washington, D. C.	21–30	21–30[e]	21–30	21–30	21–30	31–40	31–40	31–40
Waterbury, Conn.	[a]	[a]	51–60	51–60	51–60	61–70	61–70	61–70
Waterloo, Ia.	d	11–20	11–20	11–20	21–30	21–30	71–80	71–80
Waukesha, Wis.	21–30	21–30	21–30	31–40	3i–40	[a]	41–50	41–50
Wichita, Kan.	[a]	21–30	21–30	[a]	[a]	91–100	91–100	91–100
Wilkes-Barre, Pa.	d	10 or less	10 or less	10 or less	11–20	11–20	11–20	31–40
Wilmington, Del.	[a]	[a]	11–20	21–30	31–40	41–50	41–50	41–50
Worcester, Mass.	31–40	31–40	31–40	31–40	41–50	41–50	51–60	51–60
Yonkers, N. Y.	11–20	11–20	11–20	11–20	11–20	31–40	31–40	41–50
York, Pa.	[a]	[a]	[a]	10 or less	21–30	51–60	51–60	51–60
Youngstown, Ohio	[a]	[a]	[a]	51–60	61–70	61–70	71–80	71–80

[a] No report.

[b] The increase since 1914 is an adjusted figure which will not be obtained by applying the percentage of change within the last preceding four month period to the previously reported increase since 1914.

[c] Decrease.

[d] No change.

[e] Corrected figure, based on better information than that originally available. See footnote 1, p. 45.

RENTS OF WAGE EARNERS' HOUSES IN SPECIFIED CITIES, BETWEEN JULY, TO NOVEMBER, 1924, INCLUSIVE—(*Continued*)

Conference Board)

July, 1921	Nov., 1921	March, 1922	July, 1922	Nov., 1922	March, 1923	July, 1923	Nov., 1923	March, 1924	July, 1924	Nov., 1924
71–80	[a]	71–80	71–80	71–80	[a]	[a]	61–70	61–70	61–70	71–80
61–70	[a]	61–70	51–60	51–60	61–70	71–80	71–80	81–90	81–90	81–90
121–130	121–130	81–90	81–90	81–90	81–90	91–100	91–100	151–160	151–160	[a]
21–30	21–30	21–30	21–30	21–30	21–30	21–30	51–60[b]	51–60	51–60	51–60
91–100	91–100	101–110	101–110	151–160[b]	151–160	151–160	151–160	[a]	101–110	121–130
[a]	[a]	[a]	[a]	[a]	[a]	[a]	61–70	61–70	31–40	21–30
81–90	81–90	81–90	81–90	81–90	91–100	91–100	91–100	91–100	91–100	91–100
41–50	41–50	41–50	41–50	21–30[b]	21–30	21–30	51–60[b]	51–60	51–60	71–80
61–70	61–70	61–70	51–60	51–60	51–60	[a]	[a]	[a]	[a]	[a]
31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40
81–90	81–90	101–110	101–110	111–120	111–120	131–140	131–140	101–110	91–100	91–100
41–50	41–50	41–50	41–50	81–90[b]	81–90	81–90	91–100	91–100	91–100	91–100
[a]	41–50	41–50	31–40	11–20	11–20	11–20	81–90[b]	81–90	71–80	51–60
51–60	51–60	31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40	31–40
81–90	81–90	81–90	81–90	71–80	71–80	71–80	81–90	81–90	61–70	51–60
71–80	71–80	71–80	71–80	71–80	81–90	101–110	101–110	101–110	101–110	101–110
31–40	31–40	31–40	41–50	41–50	41–50	41–50	41–50	41–50	41–50	41–50
91–100	[a]	[a]	[a]	[a]	[a]	[a]	71–80	81–90	81–90	71–80
31–40	21–30	21–30	21–30	10 or less[b]	10 or less	10 or less	31–40[b]	21–30	21–30	21–30
61–70	61–70	61–70	61–70	71–80	71–80	71–80	91–100	91–100	91–100	91–100
[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
51–60	51–60	51–60	81–90	171–180[b]	171–180	[a]	171–180	171–180	171–180	171–180
41–50	31–40	31–40	21–30	21–30	31–40	31–40	31–40	41–50	51–60	51–60
[a]	[a]	[a]	[a]	[a]	[a]	[a]	31–40	31–40	11–20	10 or less
91–100	71–80	61–70	61–70	61–70	61–70	51–60	51–60	51–60	41–50	61–70
[a]	[a]	[a]	[a]	[a]	[a]	[a]	51–60	41–50	41–50	41–50
81–90	81–90	81–90	91–100	111–120	111–120	111–120	121–130	121–130	121–130	131–140
81–90	81–90	81–90	81–90	121–130	121–130	121–130	121–130	121–130	121–130	121–130
81–90	81–90	81–90	81–90	81–90	81–90	81–90	81–90	81–90	81–90	81–90
71–80	71–80	71–80	71–80	91–100[b]	111–120	111–120	111–120	111–120	121–130	121–130
51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60
21–30	21–30	21–30	21–30	21–30	21–30	21–30	21–30	21–30	21–30	21–30
31–40	31–40	31–40	21–30	11–20	11–20	11–20	11–20	11–20	11–20	11–20
71–80	71–80	71–80	61–70	61–70	71–80	71–80	71–80	81–90	81–90	71–80
31–40	21–30	21–30	21–30	21–30	21–30	21–30	21–30	21–30	21–30	21–30
61–70	61–70	61–70	41–50	21–30[b]	31–40	31–40	41–50[b]	71–80	71–80	71–80
111–120	111–120	111–120	111–120	111–120	111–120	121–130	121–130	121–130	121–130	101–110
51–60	41–50	41–50	41–50	21–30[b]	21–30	31–40	41–50	41–50	41–50	51–60
[a]	[a]	[a]	[a]	[a]	[a]	[a]	81–90	81–90	71–80	61–70
81–90	81–90	81–90	81–90	81–90	81–90	81–90	91–100	91–100	91–100	91–100
51–60	51–60	51–60	61–70	61–70	61–70	61–70	61–70	91–100	91–100	91–100
[a]	[a]	[a]	[a]	[a]	[a]	[a]	31–40	21–30	21–30	21–30
71–80	71–80	81–90	81–90	81–90	81–90	91–100	91–100	91–100	91–100	91–100
[a]	[a]	21–30	[a]	41–50	51–60	[a]	101–110[b]	101–110	101–110	111–120
31–40	31–40	31–40	31–40	41–50	51–60	81–90	81–90	81–90	91–100	91–100
51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	61–70	61–70	61–70
71–80	51–60	41–50	41–50	31–40	41–50	41–50	61–70	61–70	61–70	41–50
[a]	31–40	31–40	61–70	41–50[b]	51–60	51–60	51–60	51–60	51–60	51–60
91–100	91–100	71–80	71–80	51–60	51–60	51–60	11–20[b]	10 or less	*10 or less*[c]	*10 or less*[c]
31–40	31–40	31–40	41–50	41–50	41–50	41–50	61–70[b]	61–70	71–80	71–80
41–50	41–50	41–50	41–50	41–50	41–50	41–50	71–80[b]	71–80	61–70	61–70
51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60	51–60
41–50	41–50	41–50	51–60	51–60	51–60	91–100	91–100	91–100	91–100	91–100
51–60	51–60	51–60	51–60	51–60[c]	51–60	31–40	31–40	31–40	31–40	31–40
71–80	71–80	51–60	51–60	41–50	41–50	41–50	51–60	71–80	71–80	71–80

[a] No report.

[b] The increase since 1914 is an adjusted figure which will not be obtained by applying the percentage of change within the last preceding four-month period to the previously reported increase since 1914.

[c] Decrease.

[d] No change.

during the war period there was little building construction, and that with the normal obsolescence from year to year and a normal increase in population the supply of houses fell behind the demand, while taxes were increasing and the cost of repairs and new building mounted. In some places, population has declined and rents have receded even from their pre-war level.

Clothing

Clothing required slightly more than one-eighth of the average family's expenditures for the cost of living, according to pre-war standards. With the shifting of price increases, however, at the peak of the rise in the cost of living in July, 1920, more than one-sixth was necessary. This was because clothing prices had advanced far higher than the cost of any other major item in the family budget, while certain other items, notably rents, at that time lagged far behind.

The rise in clothing prices occurred very early in the period of inflation. They were estimated to have increased 20% by the summer of 1916, and while, later, a 20% increase within a short period was not unusual, at that time such an increase was of striking interest. Except for a brief period in 1917 when food prices shot up as the result of American participation in the war, clothing led all other major items in price increases. At the peak of clothing prices in the spring of 1920, they averaged 177% above their pre-war level. As will appear presently, the prices of many individual articles of clothing were far ahead of this.

As clothing prices started up first, they also dropped first, so that, while all other prices were still rising in the spring and summer of 1920, clothing prices had already started downward. The decline was sharp. In one year, between March, 1920 and March, 1921, average clothing prices dropped 103 points, a decrease of more than 37%, to a level of 74% above July, 1914; in the next year they fell off 20 points more, so that in March, 1922, average clothing prices were 54% above the pre-war level or 44% lower than at their peak two years before. Since March, 1922, clothing prices have risen considerably, and in November, 1924, they were reported to average 73% above July, 1914.

These increases and decreases in clothing prices within the decade represent changes in the cost of a number of articles, combined in such a way as to give proper importance to each, and taking into account the fact that large or small increases for any one may not have had a corresponding effect on the budget as a whole. In the discussion which follows, the cost of clothing will be taken up, first, by separate articles and, second, as combined in balanced clothing budgets.

Separate Articles of Clothing

Table 15 brings together in summary form the average retail prices of 29 selected articles of yard goods and wearing apparel which constitute the basis of the Board's estimates of changes in clothing prices on those dates for which comprehensive reports are available.[1] The index numbers of these prices are shown in Table 16. From these tabulations it is quite apparent that the advance in the price of some cotton yard goods exceeded all other price advances and that even work shirts and overalls, which increased in cost more than any other articles of wearing apparel, never approached the level of prices of the heavier, coarser yard goods of which they were made. It is apparent, too, that cotton goods prices went far higher than those for wool and that the coarser and less expensive goods went higher than the sheerer and more expensive articles. Some yard goods prices were still going up in 1920, along with the advance for a number of articles made from them, when other clothing prices had turned downward. The entire movement, however, has been characterized by the maintenance of the relative position of the different grades of goods,[2] the cheaper, coarser grades showing continuously a relatively higher level since 1914 than the finer and originally more expensive articles.

Yard goods prices in general at first went higher than the

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[1] Yard goods prices are secured for comparative purposes only; they are not used in making up the clothing budget.

[2] Except the price of poplin, which has not been much in demand in recent years.

TABLE 15: AVERAGE RETAIL PRICES OF SELECTED ARTICLES OF YARD GOODS AND WEARING APPAREL ON SPECIFIED DATES, JULY, 1914 TO NOVEMBER, 1924, INCLUSIVE

(National Industrial Conference Board)

Article	July, 1914	July, 1915	July, 1916	April, 1917	June, 1918	November, 1918	March, 1919	July, 1919	November, 1919	March, 1920	July, 1920	November, 1920	March, 1921	July, 1921	November, 1921	March, 1922	July, 1922	November, 1922	March, 1923	July, 9123	November, 1923	March, 1924	July, 1924	November, 1924
Wool yard goods																								
Serge	$1.00	$1.12	$1.38	$1.72	$2.17	$ 2.32	$1.96	$2.21	$2.62	$2.97	$2.88	$2.23	$1.71	$1.60	$1.52	$1.47	$1.45	$1.53	$1.63	$1.65	$1.65	$1.69	$1.63	$1.69
Poplin	1.50	1.60	1.84	2.23	2.89	2.95	2.53	2.80	3.24	3.62	3.57	2.95	2.25	2.12	2.01	1.97	1.97	2.03	2.18	2.17	2.21	2.20	2.19	2.22
Broadcloth	2.00	2.16	2.59	3.17	4.04	4.31	3.80	4.25	4.82	5.27	5.15	4.41	3.51	3.26	3.13	3.01	2.99	3.10	3.24	3.29	3.26	3.32	3.27	3.42
Cotton yard goods																								
Percale	.07½	.09	.12	.16	.25	.27	.22	.26	.32	.39	.42	.28	.20	.18	.18	.18	.18	.19	.20	.21	.20	.22	.21	.21
Gingham	.10	.11	.14	.19	.29	.32	.26	.29	.34	.41	.43	.31	.21	.19	.20	.20	.19	.20	.23	.23	.22	.23	.22	.22
Longcloth	.12½	.13	.17	.21	.29	.31	.26	.29	.34	.43	.44	.30	.22	.19	.20	.20	.19	.21	.23	.23	.22	.23	.23	.23
Fruit of the Loom	.15	.16	.19	.24	.32	.35	.28	.34	.39	.47	.48	.28	.23	.21	.23	.22	.23	.24	.26	.26	.25	.25	.25	.25
Voile	.25	.25	.27	.33	.41	.47	.42	.48	.55	.67	.66	.49	.39	.34	.35	.34	.33	.35	.39	.39	.39	.41	.40	.40
Hosiery																								
Men's	.15	.16	.17	.21	.27	.28	.26	.29	.32	.36	.36	.28	.22	.21	.21	.21	.21	.22	.23	.23	.23	.24	.23	.24
Women's	.25	.26	.28	.35	.45	.49	.46	.51	.57	.69	.70	.54	.40	.36	.37	.36	.37	.38	.39	.40	.40	.41	.40	.41
Knit underwear																								
Men's union suits	.50	.52	.63	.77	.99	1.15	.99	1.05	1.28	1.56	1.52	1.40	1.02	.90	.93	.90	.87	.93	.96	.96	1.00	1.03	1.01	1.04
Women's vests	.10	.11	.12	.16	.20	.23	.21	.22	.26	.33	.33	.29	.22	.20	.20	.20	.19	.20	.21	.22	.23	.24	.23	.23
Muslin underwear																								
Women's combinations	1.00	1.02	1.10	1.29	1.64	1.83	1.61	1.80	2.06	2.43	2.37	1.84	1.37	1.29	1.23	1.22	1.23	1.27	1.36	1.34	1.37	1.38	1.35	1.36
Suits																								
Men's	15.00	15.57	17.40	19.98	24.44	26.40	25.96	28.17	34.21	40.47	37.17	30.97	23.87	23.01	23.10	22.00	21.87	22.89	24.16	24.53	26.04	25.69	25.40	25.28
Women's	15.00	15.52	17.93	21.16	25.68	26.15	24.07	28.41	31.51	38.43	34.66	29.65	23.44	22.50	22.02	20.84	21.19	22.81	23.55	23.11	23.18	23.49	22.25	22.91
Coats																								
Men's	10.00	[a]	[a]	[a]	[a]	19.91	18.39	21.30	26.78	33.02	33.67	27.27	19.09	19.36	19.16	18.13	18.53	19.07	20.57	20.90	21.94	21.04	21.08	21.31
Women's	10.00	[a]	[a]	[a]	[a]	19.11	17.44	21.59	23.90	30.44	25.59	25.09	18.07	17.15	16.73	15.41	15.54	16.95	17.57	17.29	18.37	18.08	17.17	17.95
Shirts and blouses																								
Men's work shirts	.50	[a]	[a]	[a]	[a]	1.33	1.16	1.26	1.45	1.64	1.73	1.41	.96	.86	.90[b]	.89	.89	.93	.99	1.00	1.01	1.02	.99	.97
Men's work shirts	1.00	1.06	1.23	1.49	1.86	1.97	1.79	1.91	2.15	2.44	2.49	2.10	1.44	1.32	1.34	1.30	1.31	1.37	1.43	1.45	1.48	1.50	1.45	1.45
Men's negligee shirts	1.00	[a]	[a]	[a]	[a]	1.79	1.63	1.88	2.24	2.62	2.66	2.10	1.49	1.40	1.37	1.33	1.31	1.37	1.48	1.47	1.51	1.55	1.49	1.50
Women's blouses	1.00	1.02	1.07	1.25	1.51	1.64	1.55	1.75	2.02	2.39	2.24	1.74	1.47	1.42	1.36	1.31	1.33	1.37	1.42	1.43	1.45	1.47	1.46	1.50
Overalls	.75	.80	1.01	1.39	1.96	2.14	1.86	1.92	2.26	2.60	2.73	2.23	1.55	1.39	1.38	1.37	1.37	1.47	1.63	1.69	1.72	1.75	1.74	1.68
Shoes																								
Men's	3.50	3.78	4.31	5.06	5.92	5.88	6.06	6.93	8.42	9.43	9.11	7.86	6.43	5.86	5.55	5.19	5.29	5.39	5.50	5.67	5.64	5.65	5.68	5.67
Women's	3.00	3.55	4.13	4.96	5.66	5.72	5.92	6.94	8.30	9.28	8.82	8.14	6.34	5.87	5.56	5.18	5.20	5.20	5.25	5.49	5.59	5.54	5.62	5.60
Gloves																								
Men's dogskin	1.25	1.31	1.54	1.91	2.29	2.27	2.22	2.47	2.69	3.22	3.21	3.28	2.37	2.22	2.11	1.92	1.91	1.87	1.95	1.97	2.00	2.02	2.04	2.01
Women's cape	1.00	1.09	1.37	1.73	2.06	2.00	2.02	2.25	2.60	3.17	3.16	3.13	2.34	2.11	1.99	1.80	1.76	1.82	1.93	1.96	1.98	1.95	1.96	1.92
Hats																								
Men's felt	2.00	2.00	2.35	2.71	3.33	3.49	3.43	3.66	4.34	5.06	5.28	5.01	3.74	3.42	3.21	2.99	2.95	3.00	3.21	3.29	3.23	3.30	3.35	3.40
Women's velvet	1.50	1.54	1.68	2.02	2.61	2.79	2.80	3.16	3.49	4.34	4.24	3.41	2.97	2.50	2.47	2.33	2.27	2.63	2.61	2.76	3.05	3.03	2.97	2.85
Women's straw	1.00	1.04	1.15	1.43	1.78	[a]	1.96	2.11	[a]	2.87	2.85	2.93	2.53	1.98	1.82	1.91	1.76	1.65	1.96	2.00	2.13	2.11	2.17	2.02

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[a] No report.

[b] This is a corrected figure, based on a recomputation of prices.

TABLE 16: INDEX NUMBERS OF AVERAGE RETAIL PRICES OF SELECTED YARD GOODS AND WEARING APPAREL ON SPECIFIED DATES, JULY, 1914 TO NOVEMBER, 1924, INCLUSIVE

(July, 1914 = 100)

(National Industrial Conference Board)

Article	July, 1914	July, 1915	July, 1916	April, 1917	June, 1918	November, 1918	March, 1919	July, 1919	November, 1919	March, 1920	July, 1920	November, 1920	March, 1921	July, 1921	November, 1921	March, 1922	July, 1922	November, 1922	March, 1923	July, 1923	November, 1923	March, 1924	July, 1924	November, 1924
Wool yard goods																								
Serge	100	111.9	138.1	172.3	216.7	231.6	195.8	221.0	261.9	296.6	287.6	223.1	171.3	160.0	152.0	147.0	145.0	153.0	163.0	165.0	165.0	169.0	163.0	169.0
Poplin	100	106.4	122.4	148.4	192.5	196.4	168.9	186.6	216.0	241.3	237.7	196.5	150.1	141.3	134.0	131.3	131.3	135.3	145.3	144.7	147.3	146.7	146.0	148.0
Broadcloth	100	108.2	129.7	158.4	202.1	215.4	190.2	212.4	241.0	263.3	257.6	220.5	175.3	163.0	156.5	150.5	149.5	155.0	162.0	164.5	163.0	166.0	163.5	171.0
Cotton yard goods																								
Percale	100	118.0	160.0	211.0	338.4	364.4	290.7	346.7	426.7	522.2	560.0	366.9	265.7	240.0	240.0	240.0	240.0	253.3	266.7	280.0	266.7	293.3	280.0	280.0
Gingham	100	112.5	143.3	193.4	289.6	316.7	261.0	290.0	338.0	414.0	433.5	313.9	210.3	190.0	200.0	200.0	190.0	200.0	230.0	230.0	220.0	230.0	220.0	220.0
Longcloth	100	107.2	132.9	164.4	235.0	251.1	204.0	232.0	274.4	314.6	349.2	240.6	174.5	152.0	160.0	160.0	152.0	168.0	184.0	184.0	176.0	184.0	184.0	184.0
Fruit of the Loom	100	107.5	125.1	157.7	215.3	236.5	186.6	226.7	260.7	312.6	321.1	187.9	152.7	140.0	153.3	146.7	153.3	160.0	173.3	173.3	166.7	166.7	166.7	166.7
Voile	100	101.0	109.9	130.7	165.8	187.9	167.2	192.0	221.2	266.4	263.6	196.0	155.5	136.0	140.0	136.0	132.0	140.0	156.0	156.0	156.0	164.0	160.0	160.0
Hosiery																								
Men's	100	103.7	115.8	141.8	183.3	189.0	172.0	193.3	208.0	240.0	239.3	188.7	148.9	140.0	140.0	140.0	140.0	146.7	153.3	153.3	153.3	160.0	153.3	160.0
Women's	100	102.6	113.9	138.5	181.5	194.2	184.4	204.0	226.0	275.2	279.2	217.6	158.0	144.0	148.0	144.0	148.0	152.0	156.0	160.0	160.0	164.0	160.0	164.0
Knit underwear																								
Men's union suits	100	103.9	126.1	153.3	197.2	229.7	198.0	210.0	256.8	311.6	303.0	280.3	204.8	180.0	186.0	180.0	174.0	186.0	192.0	192.0	200.0	206.0	202.0	208.0
Women's vests	100	105.2	121.4	156.9	198.4	227.9	208.0	220.0	263.0	330.0	329.7	294.5	221.6	200.0	200.0	200.0	190.0	200.0	210.0	220.0	230.0	240.0	230.0	230.0
Muslin underwear																								
Women's combination	100	102.3	110.2	129.1	163.9	182.7	161.0	180.0	206.0	242.5	237.0	184.1	137.1	129.0	123.0	122.0	123.0	127.0	136.0	134.0	137.0	138.0	135.0	136.0
Suits																								
Men's	100	103.8	116.0	133.2	163.0	176.0	173.1	187.7	228.1	269.8	247.8	206.5	159.1	153.4	154.0	146.7	145.8	152.6	161.1	163.5	173.6	171.3	169.3	168.5
Women's	100	103.5	119.5	141.1	171.2	174.4	160.5	189.4	210.7	256.2	231.0	197.7	156.3	150.0	146.8	138.9	141.3	152.1	157.0	154.1	154.5	156.6	148.3	152.7
Coats																								
Men's	100	[a]	[a]	[a]	[a]	199.1	183.9	213.0	267.8	330.2	336.7	272.7	190.9	193.6	191.6	181.3	185.3	190.7	205.7	209.0	219.4	210.4	210.8	213.1
Women's	100	[a]	[a]	[a]	[a]	191.1	174.4	215.9	239.0	304.4	255.9	250.9	180.7	171.5	167.3	154.1	155.4	169.5	175.7	172.9	183.7	180.8	171.7	179.5
Shirts and blouses																								
Men's work shirts	100	[a]	[a]	[a]	[a]	266.1	231.0	252.0	289.6	328.4	346.4	281.4	192.4	172.0	179.0[b]	178.0	178.0	186.0	198.0	200.0	202.0	204.0	198.0	194.0
Men's work shirts	100	106.0	122.7	148.8	186.0	196.7	79.0	191.0	215.4	243.7	248.6	200.2	143.6	132.0	134.0	130.0	131.0	137.0	143.0	145.0	148.0	150.0	145.0	145.0
Men's negligee shirts	100	[a]	[a]	[a]	[a]	179.4	163.4	188.0	224.3	262.4	265.5	209.6	149.2	140.0	137.0	133.0	131.0	137.0	148.0	147.0	151.0	155.0	149.0	150.0
Women's blouses	100	101.7	106.7	125.0	150.5	164.2	155.3	175.0	201.6	239.2	223.8	174.3	147.0	142.0	136.0	131.0	133.0	137.0	142.0	143.0	145.0	147.0	146.0	150.0
Overalls	100	107.0	135.3	185.0	260.9	285.7	248.3	256.0	300.7	347.2	364.3	297.5	206.8	185.3	184.0	182.7	182.7	196.0	217.3	225.3	229.3	233.3	232.0	224.0
Shoes																								
Men's	100	107.9	123.1	144.6	169.1	168.1	173.2	198.0	240.4	269.3	260.4	224.7	182.5	167.4	158.6	148.3	151.1	154.0	157.1	162.0	161.1	161.4	162.3	162.0
Women's	100	118.3	137.7	165.4	188.5	190.5	197.4	231.2	276.3	309.4	294.0	271.4	211.4	195.7	185.3	172.7	173.3	173.3	175.0	183.0	186.3	184.7	184.0	186.7
Gloves																								
Men's dogskin	100	104.6	123.4	152.6	183.5	181.4	177.8	197.6	215.2	257.7	257.1	262.3	189.6	177.6	168.8	153.6	152.8	149.6	156.0	157.6	160.0	161.6	163.2	160.8
Women's cape	100	108.9	137.0	173.4	206.5	200.2	202.2	225.0	259.8	317.1	315.6	313.3	234.4	211.0	199.0	180.0	176.0	182.0	193.0	196.0	198.0	195.0	196.0	192.0
Hats																								
Men's felt	100	[c]	117.4	135.5	166.5	174.7	171.3	183.0	217.0	253.2	263.8	250.7	187.2	171.0	160.5	149.5	147.5	150.0	160.5	164.5	161.5	165.0	167.5	170.0
Women's velvet	100	102.7	111.8	134.9	173.7	186.1	186.4	210.7	232.7	289.3	282.9	227.1	198.3	166.7	164.7	155.3	151.3	175.3	174.0	184.0	203.3	202.0	198.0	190.0
Women's straw	100	103.6	115.0	142.5	178.0	[a]	196.1	211.0	[a]	287.4	284.9	292.6	253.3	198.0	182.0	191.0	176.0	165.0	196.0	200.0	213.0	211.0	217.0	202.0

[a] No report.

[b] This is a corrected figure, based on a recomputation of prices.

[c] No change.

prices of articles made from them, but ready made garments of wool soon caught up with the price of these yard goods. Yard goods prices did not drop so low nor stay down so long as prices of many other articles. But, while at the peak of prices there was a wide range of difference between the largest and the smallest increase shown, since 1921 these differences have not been so marked. A wardrobe consisting partly of goods ready to wear and partly made at home from yard goods prior to 1920 would have shown a greater increase in cost above basic prices in 1914 than one consisting entirely of ready made articles. Later, this difference would not have been so great.[1] The comparative trend of wool yard goods prices and prices of garments made of wool, and of cotton yard goods and garments made o fcotton, is shown in Charts 4A and 4B.

Hosiery and knit underwear prices followed the general trend of yard goods and ready to wear quotations, reaching about the same level as the latter and, in some instances, not having fallen back so far. Indeed, in November, 1924, only knit underwear, men's overcoats, overalls and women's straw hats were twice or more their pre-war prices; among the yard goods percale and gingham were more than double their 1914 price. The lowest prices, relatively, in November, 1924, were for women's muslin combinations, 36% above their pre-war price; men's shirts, women's blouses and wool poplin were all one-half or less than one-half more than their pre-war price.

Prices of shoes, gloves and hats, on the whole, advanced to the peak about as the prices of other clothing items, the difference being that women's clothing costs advanced more and men's less than the average. This relationship has been consistently maintained throughout the period of downward movement, also, so that while in November, 1924, the average prices of women's shoes, gloves and hats were 87%, 92%, 90% and 102% respectively above the pre-war level, corresponding articles for men were only 62%, 61% and 70% higher.

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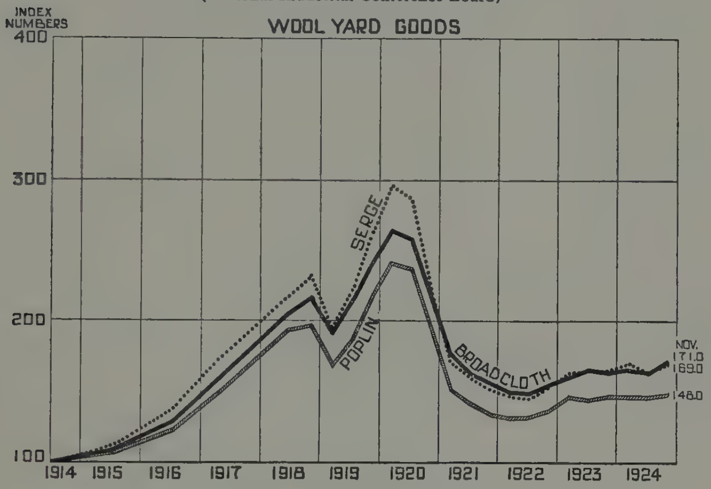
[1] See pp. 116 ff. of this volume for discussion of the effect of using a large quantity of yard goods in the clothing budget.

Chart 4a: Index Numbers of Average Retail Prices of Selected Wool Yard Goods and Woolen Wearing Apparel, July, 1914 to November, 1924, Inclusive

Average Prices in July, 1914 = 100

(National Industrial Conference Board)


WOOL YARD GOODS

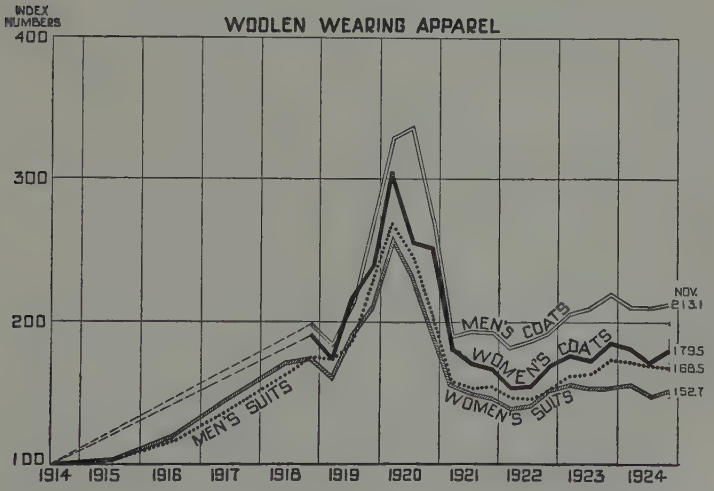

WOOLEN WEARING APPAREL

CHART 4B: INDEX NUMBERS OF AVERAGE RETAIL PRICES OF SELECTED COTTON YARD GOODS AND COTTON WEARING APPAREL, JULY, 1914 TO NOVEMBER, 1924, INCLUSIVE

Average Prices in July, 1914 = 100

(National Industrial Conference Board)

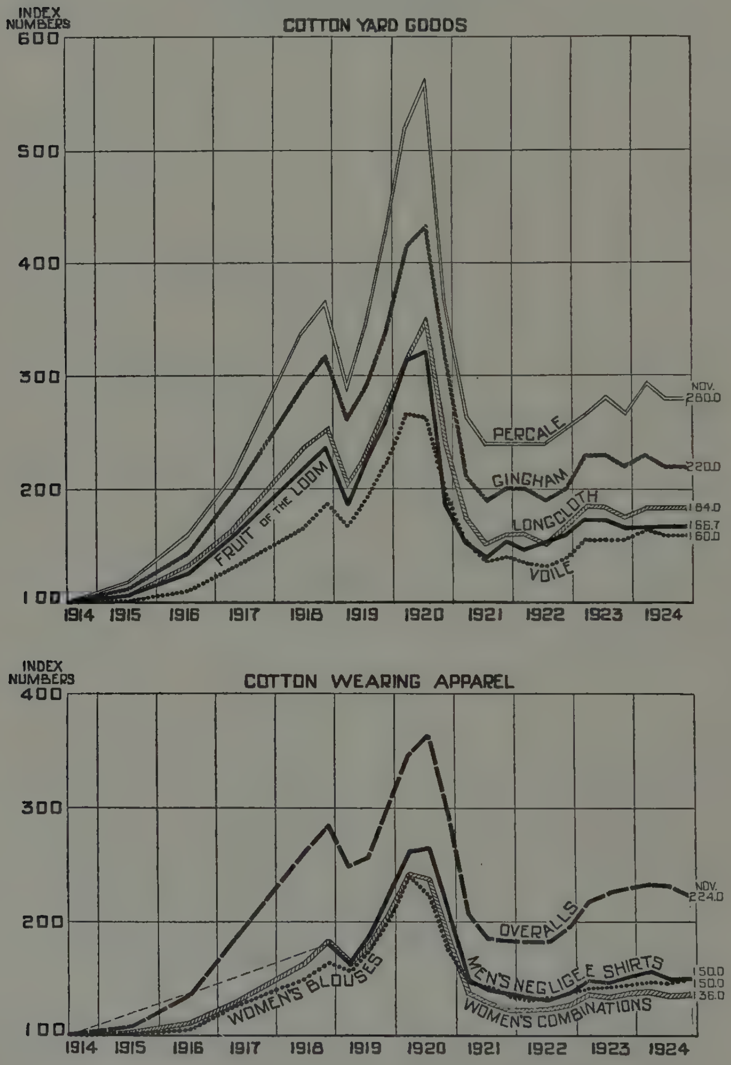


TABLE 17: TRIAL BUDGETS OF CLOTHING FOR ONE YEAR FOR A MAN AND A WOMAN, BASED ON AVERAGE PRICES ON SPECIFIED DATES, JULY, 1914 TO NOVEMBER, 1924, INCLUSIVE

(National Industrial Conference Board)

Article	July, 1914	June, 1918	November, 1918	March, 1919	July, 1919	November, 1919	March, 1920	July, 1920	November, 1920	March, 1921	July, 1921	November, 1921	March, 1922	July, 1922	November, 1922	March, 1923	July, 1923	November, 1923	March, 1924	July, 1924	November, 1924
Man's Budget																					
Suit	$15.00	$25.00	$26.50	$26.00	$28.00	$34.00	$40.50	$37.17	$30.97	$23.87	$23.01	$23.10	$22.00	$21.87	$22.89	$24.16	$24.53	$26.04	$25.69	$25.40	$25.28
Overcoat	10.00	18.00	20.00	18.50	21.50	27.00	33.00	33.67	27.27	19.09	19.36	19.16	18.13	18.53	19.07	20.57	20.90	21.94	21.04	21.08	21.31
Heavy trousers	3.50	6.00	6.50	6.00	7.00	8.50	10.50	10.23	8.39	6.13	6.07	6.05	5.74	5.80	6.01	6.42	6.52	6.88	6.68	6.65	6.68
Two shirts	2.00	2.70	3.60	3.25	3.80	4.50	5.25	5.32	4.20	2.98	2.79	2.74	2.66	2.62	2.74	2.97	2.94	3.03	3.11	2.98	3.00
Three work shirts	1.75[a]	3.75	4.40	4.10	4.30	4.80	5.40	5.70	4.63	3.18	2.87	2.96	2.94	2.94	3.07	3.26	3.31	3.34	3.38	3.26	3.20
Three pairs overalls	2.25	5.50	6.45	5.55	5.75	6.75	7.80	8.19	6.69	4.65	4.18	4.13	4.11	4.11	4.41	4.90	5.08	5.17	5.26	5.22	5.05
Shoes and repairs	9.00	15.00	15.00	15.50	17.75	21.50	23.75	22.94	19.72	15.93	14.56	13.77	12.85	13.10	13.37	13.63	14.07	14.01	14.03	14.11	14.09
Eight pairs hose	1.20	2.00	2.25	2.00	2.30	2.50	2.85	2.88	2.24	1.79	1.64	1.71	1.68	1.68	1.74	1.80	1.81	1.86	1.90	1.86	1.89
Five sets underwear	3.50[b]	7.00	8.05	7.00	7.35	8.65	9.50	9.28	8.60	6.47	5.78	5.94	5.77	5.60	5.92	6.13	6.11	6.34	6.48	6.38	6.57
Two nightshirts	1.50	2.50	2.70	2.60	2.90	3.50	3.80	3.77	2.95	2.15	2.02	1.95	1.91	1.91	1.98	2.13	2.11	2.16	2.20	2.13	2.14
Collars and ties	1.50	2.05	2.75	2.65	2.85	3.15	3.50	3.60	3.40	3.25	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Hats, caps and gloves	5.00	8.00	8.50	8.50	9.25	10.75	12.75	13.09	12.71	9.40	8.65	8.15	7.54	7.45	7.50	7.96	8.12	8.04	8.20	8.30	8.36
Sundries	2.50	4.25	5.00	4.50	5.25	6.00	6.75	6.75	6.50	5.75	5.50	5.50	5.25	5.25	5.25	5.50	5.50	5.50	5.50	5.50	5.50
All articles	$58.70	$101.75	$111.70	$106.15	$118.00	$141.60	$165.35	$162.59	$138.27	$104.64	$99.43	$98.16	$93.58	$93.86	$96.95	$102.43	$104.00	$107.31	$106.47	$105.87	$106.07
Woman's Budget																					
Coat or suit	$15.00	$25.00	$26.25	$24.00	$28.50	$32.00	$38.50	$34.66	$29.65	$23.44	$22.50	$22.02	$20.84	$21.19	$22.81	$23.55	$23.11	$23.18	$23.49	$22.25	$22.91
Wool dress	5.00	9.50	10.00	9.50	10.50	11.75	14.00	12.18	11.22	8.42	8.04	7.85	7.33	7.42	8.04	8.32	8.17	8.45	8.44	8.00	8.31
Wool skirt	2.00	3.00	3.75	3.25	4.00	4.50	5.60	4.87	4 49	3.37	3.22	3.14	2.93	2.97	3.22	3.33	3.27	3.38	3.37	3.20	3.32
Two cotton skirts	2.00	3.50	4.00	3.75	4.00	4.50	5.75	5.30	3.98	3.25	3.13	2.96	2.83	2.88	2.99	3.11	3.15	3.19	3.26	3.23	3.34
Four waists	4.00	6.00	6.60	6.20	7.00	8.00	9.60	8.96	6.96	5.88	5.69	5.44	5.24	5.32	5.49	5.66	5.74	5.78	5.89	5.85	6.02
Two house dresses	2.00	4.00	3.75	3.50	3.75	4.50	6.00	6.14	4.74	3.23	2.99	2.93	2.83	2.78	2.92	3.21	3.18	3.29	3.39	3.23	3.25
Three aprons	.90	2.10	2.85	2.25	2.55	3.00	3.00	3.15	2.34	1.64	1.52	1.60	1.58	1.51	1.59	1.75	1.74	1.72	1.78	1.78	1.74
Shoes, overshoes and repairs	6.65	12.00	12.50	13.00	15.25	18.50	20.00	19.05	17.55	13.56	12.52	11.83	10.98	11.02	11.02	11.13	11.67	11.88	11.78	11.74	11.91
Hosiery	1.50	2.70	3.00	2.75	3.00	3.45	4.15	4.19	3.24	2.37	2.17	2.24	2.16	2.22	2.29	2.36	2.40	2.42	2.45	2.39	2.45
Corsets	2.00	3.00	3.50	3.50	3.75	4.25	4.85	4.74	3.68	2.74	2.58	2.46	2.44	2.46	2.55	2.72	2.68	2.74	2.76	2.70	2.71
Six union suits	3.25[c]	6.00	7.25	6.50	7.00	8.25	9.50	9.36	8.58	6.43	5.75	5.89	5.75	5.54	5.85	6.13	6.20	6.43	6.59	6.45	6.53
Muslin underwear	3.20	5.00	5.85	5.15	5.75	6.75	7.75	7.58	5.89	4.39	4.13	3.94	3.90	3.94	4.08	4.35	4.29	4.38	4.42	4.31	4.34
Three petticoats	1.75	3.00	3.50	3.00	3.25	3.75	4.90	4.75	3.59	2.56	2.39	2.26	2.23	2.25	2.35	2.54	2.50	2.56	2.58	2.51	2.53
Three nightgowns	2.40	3.75	4.50	3.85	4.30	5.25	5.80	5.69	4.42	3.29	3.10	2.96	2.93	2.95	3.06	3.26	3.22	3.29	3.31	3.24	3.25
Hats	2.00	3.50	3.60	3.60	4.25	4.75	6.25	6.14	5.52	4.76	3.81	3.63	3.60	3.40	3.59	3.89	4.05	4.42	4.38	4.40	4.15
Gloves	1.50	2.60	3.00	3.00	3.35	3.75	4.75	4.73	4.70	3.52	3.16	2.98	2.70	2.64	2.73	2.90	2.94	2.97	2.93	2.95	2.88
Sundries	3.00	5.00	5.50	5.00	5.50	6.50	7.50	7.50	7.00	6.25	60.0	6.00	5.75	5.75	5.75	6.00	6.00	6.00	6.00	6.00	6.00
All articles	$58.15	$99.65	$109.40	$101.80	$115.70	$133.45	$157.90	$148.99	$127.55	$99.10	$92.70	$90.13	$86.02	$86.24	$90.33	$94.21	$94.30	$96.08	$97.27	$94.23	$95.64

[a] One at 75 cents, two at 50 cents.

[b] Three at 50 cents, two at $1.00.

[c] Three at 75 cents, three at 33⅓ cents.

Clothing Budgets

How important these various price changes were relatively is not seen until the articles covered are combined somewhat in the proportion in which families use them. For this purpose, as already explained,[1] the tentative clothing budgets were constructed. These are shown in Table 17 for all of the dates on which the Board has collected comparable data on a comprehensive scale.[2] Table 18 summarizes these so as to show the percentage of increase for

TABLE 18: INDEX NUMBERS OF THE RETAIL COST OF CLOTHING, BASED ON AVERAGE PRICES ON SPECIFIED DATES, JULY, 1914 TO NOVEMBER, 1924, INCLUSIVE

(July, 1914 = 100)

(National Industrial Conference Board)

Date	Men's Clothing	Women's Clothing	All Clothing
June, 1918	173.3[a]	171.4[a]	177.0[a]
November, 1918	190.3[a]	188.1[a]	193.0[a]
March, 1919	180.8[a]	175.0[a]	181.0[a]
July, 1919	201.0	199.0	200.0
November, 1919	241.2	229.5	235.4
March, 1920	281.7	271.5	276.6
July, 1920	277.0[b]	256.2	266.4
November, 1920	235.6	219.3	227.5
March, 1921	178.3[b]	170.4	174.4
July, 1921	169.4	159.4	164.4
November, 1921	167.2[b]	155.0	161.1[b]
March, 1922	159.4	147.9	153.7
July, 1922	159.9	148.3	154.1
November, 1922	165.2	155.3	160.3
March, 1923	174.4	162.0	168.3
July, 1923	177.2	162.2	169.7
November, 1923	182.8	165.2	174.1
March, 1924	181.4	167.3	174.4
July, 1924	180.4	162.0	171.2
November, 1924	180.7	164.4	172.6

[a] Index numbers are based on figures in the higher of two sets of trial budgets; the total for all clothing takes into account the fact that less expensive clothing up to that time had increased more in cost than better grades.

[b] Revised figure.

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[1] See pp. 37 ff. of this volume.

[2] The budgets given for July, 1920 to November, 1921, inclusive, reproduce the actual prices as determined in the arithmetical calculations in place of the round numbers originally published in the reports; the budgets prior to July, 1920, cannot be thus corrected. A comparison of the two shows almost no difference in the totals. The budget for November, 1921 is a corrected figure based on a recalculation of the increase in cost of men's work shirts, which does not alter the index number, however.

an average allowance of men's clothing and a comparable allowance for women's clothing.[1]

From the beginning of the series, which shows percentages of increase first in June, 1918, above the level of July, 1914, men's clothing as a whole had advanced in cost more than women's. This has been due to the fact that of the items which rank heaviest in the budget, namely, coat, suit, trousers for men, as contrasted with coat, suit, dress and skirt for women, men's had gone up in cost far more, relatively, than had women's. Increases for men's shirts and overalls were greater than for women's blouses; the price of muslin underwear for women did not advance so much as the price of knit underwear for men.[2]

It has always been pointed out in the Board's reports that these budgets are tentative or trial budgets, constructed to afford a representative system of weighting, but that, so far as experiment has shown, any reasonable selection of articles and quantities for inclusion in such budgets would show practically identical results, so far as the final percentage of increase in the total cost of clothing is concerned. It has also been pointed out, and this fact is clearly demonstrated in Chapter V of this report, that budgets based on a considerable allowance of yard goods would necessarily show a somewhat different result, since yard goods prices changed quite differently from the prices of garments made from them.

FUEL AND LIGHT

Although the proportion of the total expenditure for the necessities of life required for fuel and light by an average family is relatively small, approximately one-twentieth of the whole budget, it is a very important item, from the point of view of physical comfort. Moreover, a substantial part of the outlay ordinarily is made in considerable sums a few times, instead of being spread over the entire year. It assumes, therefore, a significance in the average mind out of proportion, perhaps, to its total importance. Although coal prices, particularly, have increased greatly at various times since 1914, it is estimated that in order to maintain the same standard as then prevailed at no time was more than 6.6% of the total family outlay ever required for fuel and light combined and in some instances, as little as 4.3% was necessary. The average has been 5.6%, the original weight. Coal carries a heavier weight than light in this combination and as coal prices have gone up far higher, they have had more influence in the total increase in cost of this combined item than has changes in the cost of either gas or electricity.

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[1] The percentages for the separate budgets in June, 1918, November, 1918, and March, 1919 are based on the more expensive of two sets of trial budgets, but the increase for clothing as a whole is not an average of the two but rather is an estimate which takes into account the fact that at these periods the cheaper grades of goods had increased more in price than the more expensive. Beginning in July, 1919, the exact average of changes in the cost of the better grade budgets was taken.

[2] Women's hosiery and knit underwear prices advanced more than men's but muslin underwear is more important in the woman's budget than knit underwear.

Fuel

Through 1920, the trend of all coal prices was upward, distinctly so between November, 1919, and November, 1920, when threatened strikes, presidential commissions and increased wages combined with the greatly accelerated industrial demand attendant on the post-war business boom to increase cost of production or create a relative scarcity. In November, 1920, bituminous coal prices, which ever since the beginning of the war had for the most part remained at a consistently higher level than the prices of anthracite the country over, reached a peak of 146.6% above prices in July, 1914;[1] stove anthracite was 111.2% higher and chestnut, 107.1%.

These averages for the country as a whole were greatly exceeded in the eastern part of the country. When anthracite prices in this section went to 120% above the 1914 level in November, 1920, bituminous coal prices were 197% above. Again, in 1922, when anthracite prices started climbing, they went higher in the East than elsewhere; bituminous coal prices started upwards at the same time and went higher. In each of these periods, frequently anthracite was not to be had in those parts of the country customarily burning this kind of coal for domestic fuel. The substitu-

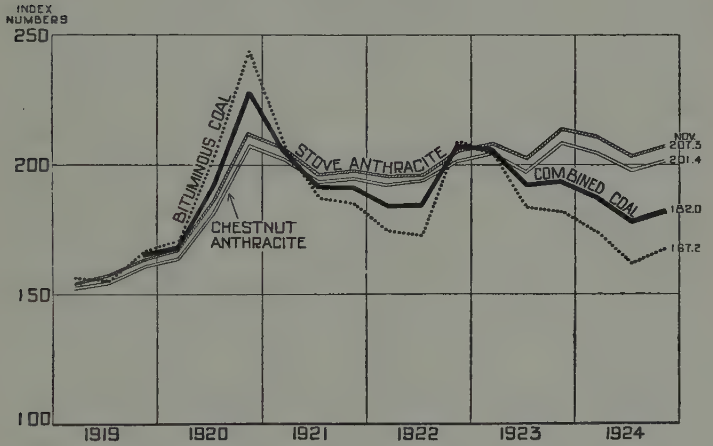
[1] Prices in July of each year ordinarily are lower than the average for the year; this fact should be borne in mind in connection with any use made of July, 1914, as a base for measuring coal prices.

tion of bituminous coal for domestic purposes at the same time that it was greatly in demand for industry sent its price upward higher than ever. The only part of the country where bituminous coal prices did not show an unusual increase was the Far West, where, although this kind of coal is the most important domestic fuel, lignite, natural gas and oil are also used. The increase in the South was more substantial; in the Middle West, where bituminous coal is extensively used for household purposes, the increase was great; but in no section of the country have bituminous coal prices remained at relatively so high a level as in the East, where the demands for industrial purposes and its substitution for anthracite have made for increases.

Chart 5a: Index Numbers of the Retail Price of Coal in Ton Lots for Domestic Use, March, 1919 to November, 1924, Inclusive

Average Prices in July, 1914 = 100

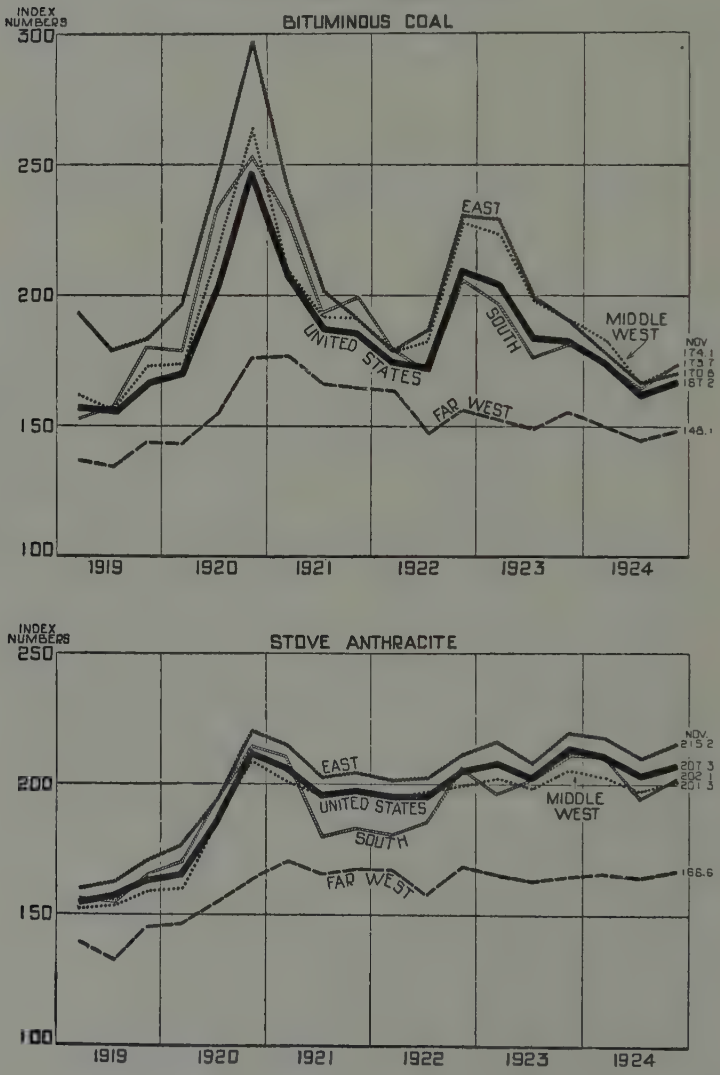
(National Industrial Conference Board)



After November, 1920, coal prices fell, bituminous prices with the season and also with the slump of industrial activity and the increasing supply of anthracite, reaching a low of 71.7% above July, 1914, in July, 1922; anthracite, less affected by industrial demands for fuel, showed a seasonal

CHART 5B: INDEX NUMBERS OF THE RETAIL PRICE OF STOVE ANTHRACITE AND BITUMINOUS COAL IN TON LOTS FOR DOMESTIC USE, BY GEOGRAPHICAL DIVISIONS AND FOR THE UNITED STATES AS A WHOLE, MARCH, 1919 TO NOVEMBER, 1924

Average Prices in July, 1914 = 100
(National Industrial Conference Board)



drop in March and July, 1921, but remained at practically the same level from July, 1921, to July, 1922. After that, anthracite prices rose slightly, and bituminous coal prices increased quite rapidly to November, 1922. Except for the seasonal drops in July, 1923, and July, 1924, anthracite prices since November, 1922, have averaged more than double their pre-war quotations in some places and, season for season, were higher in 1924 than at any time since 1914. Bituminous coal prices on the other hand had been steadily falling within this period. Relative changes in the cost of anthracite and bituminous coal are shown in Charts 5A and 5B.

The course of coal prices is thus seen to have affected different families differently, according as they lived in communities where anthracite or bituminous coal was the outstanding domestic fuel. The average cost of coal as reflected in a combination of anthracite and bituminous coal price changes, therefore, has not always reflected local conditions. This caution has been repeatedly made in the Board's reports and figures have always been given for separate localities. These are reproduced in Table 19.

In combining increases in the cost of anthracite and bituminous coal to get a single figure for the country as a whole, each is given equal weight. This weighting is on the basis of a survey made by the National Industrial Conference Board regarding the relative consumption of these two fuels. This showed that in the East anthracite is the exclusive domestic fuel, while in the other sections of the country bituminous coal is used.[1] A few notable exceptions are that it is the local custom in Detroit and other Michigan cities, Minneapolis, St. Paul and Milwaukee, for householders to burn anthracite; in Pittsburgh, bituminous coal is used. Thus, while bituminous coal consumption is spread over a much wider territory than is the consumption of anthracite, the proportion of the total population which consumes anthracite is approximately equal to that which burns bituminous coal.

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[1] Of course, oil and natural gas are important in certain localities near the sources of these fuels.

TABLE 19: INDEX NUMBERS OF THE RETAIL PRICE OF COAL IN NOVEMBER, 1924,

(July,

(National Industrial

	March, 1919			July, 1919			November, 1919		
	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
	Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
UNITED STATES	154.5	152.8	156.9	156.6	154.8	155.5	163.2	160.5	166.6
Eastern district............	159.7	156.5	193.5	162.7	159.1	179.1	170.5	166.7	183.3
Albany, N. Y..........	b	b	b	b	b	b	b	b	b
Baltimore, Md..........	164.1	165.5	b	162.2	160.8	181.2	168.9	167.4	181.2
Boston, Mass..........	148.3	143.5	193.5	161.3	156.1	191.5	171.5	166.0	202.0
Bridgeport, Conn.........	203.3	199.2	212.5	189.8	186.0	200.6	198.6	193.5	200.5
Buffalo, N. Y..........	155.2	151.1	248.9	160.5	157.3	219.0	163.3	160.0	257.1
Cambridge, Mass.........	b	b	b	b	b	b	b	b	b
Fall River, Mass.........	158.8	158.8	205.0	159.6	155.2	190.0	165.8	161.5	190.0
Lawrence, Mass.........	b	b	b	b	b	b	b	b	b
Lowell, Mass..........	b	b	b	b	b	b	b	b	b
Lynn, Mass..........	b	b	b	b	b	b	b	b	b
Manchester, N. H........	150.5	149.0	187.3	154.5	153.0	157.7	157.7	156.0	157.7
Newark, N. J..........	156.0	150.0	b	160.8	154.6	b	164.0	157.9	b
New Britain, Conn........	b	b	b	b	b	b	b	b	b
New Haven, Conn........	178.5	178.5	b	166.7	166.7	b	177.8	177.8	b
New York, N. Y.........	152.1	148.1	167.6	159.3	155.5	167.6	161.4	157.2	167.5
Paterson, N. J..........	b	b	b	b	b	b	b	b	b
Philadelphia, Pa.........	153.9	149.9	b	158.0	153.9	136.4	172.5	166.5	144.5
Pittsburgh, Pa..........	b	160.1	b	b	160.1	b	b	172.8	b
Portland, Me..........	b	b	b	b	b	b	b	b	b
Providence, R. I.........	169.5	165.3	212.3	169.4	164.9	192.3	176.2	171.5	202.0
Reading, Pa..........	b	b	b	b	b	b	b	b	b
Rochester, N. Y.........	146.3	143.8	195.2	155.9	152.3	182.3	158.8	155.5	182.3
Schenectady, N. Y........	b	b	b	b	b	b	b	b	b
Scranton, Pa..........	159.6	154.3	140.9	181.2	173.3	b	180.7	174.0	140.8
Springfield, Mass.........	b	b	b	b	b	b	b	b	b
Syracuse, N. Y..........	b	b	b	b	b	b	b	b	b
Trenton, N. J..........	b	b	b	b	b	b	b	b	b
Washington, D. C........	155.7	153.3	b	158.4	156.6	159.8	163.0	160.6	159.6
Wilmington, Del.........	b	b	b	b	b	b	b	b	b
Middle western district.......	152.1	149.5	161.8	153.3	151.1	156.1	158.7	157.6	172.8
Chicago, Ill..........	150.6	147.2	130.0	154.4	150.9	130.0	157.0	153.4	140.0
Cincinnati, Ohio.........	151.6	146.9	157.6	154.8	151.6	171.3	161.3	158.0	194.5
Cleveland, Ohio..........	143.2	144.1	143.1	149.3	152.3	147.6	161.0	159.2	171.4
Columbus, Ohio.........	148.4	148.4	162.1	143.8	148.4	162.1	150.0	155.0	179.5
Dayton, Ohio..........	b	b	b	b	b	b	b	b	b
Detroit, Mich..........	152.1	151.0	152.6	156.1	154.2	156.4	165.6	163.0	177.4
Duluth, Minn..........	141.6	138.4	154.9	152.5	149.1	148.6	156.3	152.8	156.2
Grand Rapids, Mich......	b	b	b	b	b	b	b	b	b
Indianapolis, Ind.........	151.7	151.3	148.6	155.3	151.5	153.9	162.5	168.8	177.8
Kansas City, Kan.........	b	b	b	b	b	b	b	b	b
Kansas City, Mo.........	b	b	172.6	146.7	146.7	168.6	153.1	153.1	b
Louisville, Ky..........	144.9	144.9	176.9	147.8	147.8	165.5	155.0	155.0	178.5
Milwaukee, Wis..........	154.6	152.4	141.4	157.2	154.9	144.0	160.0	157.5	164.0
Minneapolis, Minn........	156.4	153.2	163.9	153.3	150.3	155.6	155.6	152.4	175.6
Omaha, Neb..........	b	b	167.9	153.0	150.5	b	157.2	154.5	b
St. Louis, Mo..........	161.5	156.5	179.9	160.2	155.4	179.2	162.6	157.8	197.3
St. Paul, Minn..........	153.9	147.4	163.9	150.8	147.9	153.0	153.0	150.0	150.8
Far western district.........	139.8	146.5	136.4	132.3	141.9	134.1	145.1	141.5	143.9
Butte, Mont..........	b	b	129.4	b	b	133.7	b	b	140.5
Denver, Col..........	140.6	138.8	147.5	140.6	141.9	154.6	150.0	147.2	168.6
Los Angeles, Cal.........	123.5	b	128.3	123.5	b	111.5	129.4	b	133.3
Portland, Ore..........	b	b	123.7	b	b	121.1	b	b	146.1
Salt Lake City, Utah.....	152.4	152.4	138.5	b	b	130.4	153.4	150.0	143.5
San Francisco, Cal........	b	b	b	b	b	112.5	b	124.3	120.8
Seattle, Wash..........	b	b	163.5	b	b	163.5	b	b	163.5
Southern district..........	155.2	154.0	152.4	154.3	153.0	157.0	165.1	161.3	180.1
Atlanta, Ga..........	b	b	155.0	153.0	156.8	170.0	b	159.4	190.0
Birmingham, Ala.........	b	b	191.6	b	b	175.0	b	b	208.8
Charleston, S. C.........	169.7	169.7	125.9	164.0	163.6	125.9	164.0	163.6	b
Dallas, Tex..........	b	b	b	b	b	157.1	b	b	200.0
Jacksonville, Fla.........	150.0	150.0	133.3	b	b	b	b	b	b
Little Rock, Ark.........	146.6	140.0	166.4	150.6	140.0	166.7	162.9	152.5	211.5
Macon, Ga..........	b	b	b	b	b	b	b	b	b
Memphis, Tenn.........	b	b	b	b	b	b	b	b	b
New Orleans, La.........	160.0	156.1	133.3	b	b	133.3	170.0	170.0	126.2
Richmond, Va..........	153.3	153.3	176.5	b	b	b	b	b	b

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[a] The report for June, 1918 represented the increase over June 1, 1914, for stove and chestnut anthracite and two kinds of bituminous coal; that for November, 1918, the increase over November 1, 1914. These have not been reproduced here.

Ton Lots for Domestic Use, in Specified Cities, July, 1914 to Inclusive[a]

1914=100)

Conference Board)

March, 1920			July, 1920			November, 1920			March, 1921			July, 1921			November, 1921		
Anthracite		Bitu-minous Coal	Anthracite		Bitu-minous Coal	Anthracite		Bitu-minous Coal	Anthracite		Bitu-minous Coal	Anthracite		Bitu-minous Coal	Anthracite		Bitu-minous Coal
Stove	Chestnut		Stove	Chestnut		Stove	Chestnut		Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
166.7	163.7	170.0	185.5	181.4	203.1	211.2	207.1	246.6	205.7	202.2	207.3	195.8	193.3	187.4	197.4	194.5	185.2
176.4	173.4	197.4	194.1	190.4	248.7	220.7	216.5	297.1	214.6	209.6	239.9[c]	202.2	196.9	202.0	204.4	199.7	191.0
b	b	b	b	b	b	b	b	b	191.8	191.8	b	180.8	180.8	b	188.2	188.2	b
168.9	167.4	181.2	182.6	181.8	225.0	217.9	214.3	300.0	207.1	203.9	215.4	194.9	191.9	179.4	202.7	196.3	174.4
181.5	175.6	218.1	195.0	188.6	284.9	215.1	208.1	297.9	215.1	208.5	247.3	201.7	195.1	207.4	208.4	201.6	202.1
212.0	208.0	200.0	244.9	240.0	237.5	287.8	280.3	268.3	259.5	252.6	b	235.1	226.3	b	235.1	226.3	b
163.3	160.0	272.5	182.0	177.3	260.0	197.3	192.5	283.3	198.0	192.2	b	194.3	188.6	233.3	195.8	190.0	233.3
b	b	b	b	b	b	237.0	237.0	352.9	237.0	237.0	282.4	222.2	222.2	229.4	217.5	221.4	229.4
170.5	169.3	206.8	187.1	183.9	245.0	209.3	205.3	277.5	207.5	204.3	263.3	198.7	192.5	223.3	195.9	190.4	202.5
b	b	b	b	b	b	225.0	218.2	340.0	218.8	212.1	280.0	206.3	200.0	240.0	206.3	200.0	215.0
b	b	b	b	b	b	225.8	225.8	b	222.2	222.2	b	212.9	212.9	b	206.3	206.3	b
b	b	b	b	b	b	b	b	b	b	b	b	200.0	193.8	200.0	200.0	193.8	200.0
163.6	161.8	157.7	181.9	180.8	211.9	218.2	216.0	252.4	212.0	210.4	212.9	200.0	198.5	181.4	200.0	198.5	177.4
169.6	163.2	b	188.0	180.8	b	208.0	200.0	200.0	208.0	201.9	b	202.6	196.7	b	203.7	198.4	b
b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
181.4	181.4	b	211.1	211.1	b	263.0	263.0	b	233.3	233.3	b	203.7	203.7	b	207.4	207.4	b
165.5	161.1	b	184.2	177.8	b	205.2	197.9	274.1	202.7	195.5	222.9	195.1	189.1	216.9	196.6	189.6	204.8
b	b	b	b	b	b	213.1	204.7	368.8	213.1	204.7	225.0	208.2	200.0	187.5	213.1	204.7	187.5
177.9	171.6	144.5	196.6	191.2	b	218.4	213.8	b	214.8	210.2	200.0	207.4	202.3	200.0	210.2	206.8	200.0
b	172.8	200.0	b	191.1	209.5	b	234.2	b	b	185.6	b,c	b	159.8	155.6	b	b	144.4
b	b	b	b	b	b	235.3	232.8	333.3	222.2	219.8	244.4	205.9	203.7	211.1	215.8	213.4	188.9
190.4	185.5	223.0	205.1	201.0	286.7	239.0	233.1	317.3	226.1	221.1	253.1	209.5	205.3	195.1	209.5	205.3	175.3
b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
153.7	157.2	200.0	179.7	174.7	250.0	197.1	192.2	387.1	197.4	192.9	246.9	196.3	190.0	241.9	199.3	192.7	233.9
b	b	b	b	b	b	216.2	208.1	320.0	205.9	202.2	195.0	197.4	195.3	180.0	202.2	200.0	180.0
189.5	180.2	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
b	b	b	b	b	b	214.6	211.2	288.9	204.9	201.6	222.0	191.9	188.8	188.9	195.1	192.0	188.9
b	b	b	b	b	b	185.5	185.5	b	b	b	b	177.9	171.7	b	188.8	182.0	b
b	b	b	b	b	b	211.9	208.0	b	228.3	219.7	b	197.8	194.2	b	211.8	203.8	b
167.1	165.8	167.0	182.6	181.6	201.0	207.1	202.0	255.1	199.7	196.4	238.6	197.3	195.9	206.7	202.7	195.4	180.4
b	b	b	b	b	b	211.1	206.8	b	210.5	206.3	b	201.1	194.2	b	204.8	197.1	b
160.0	158.4	173.3	185.2	180.9	219.2	208.7	204.2	263.0	200.6	198.2	209.3	195.9	193.9	191.9	197.9	195.4	191.6
163.2	159.5	150.0	182.2	177.9	175.0	216.5	211.0	200.0	189.9	189.0	169.2	189.9	187.1	155.9	199.4	192.3	166.3
161.3	156.3	200.0	192.1	175.0	249.3	206.5	200.0	257.1	206.5	200.0	232.1	206.4	196.9	203.6	206.4	200.0	203.6
164.9	163.8	165.9	179.4	175.2	224.8	214.3	201.1	256.9	198.0	194.1	213.8	190.4	187.5	200.9	192.7	189.1	193.6
156.3	159.3	162.5	183.1	183.1	193.8	208.4	208.4	269.9	196.9	196.9	225.0	212.9	212.9	198.9	200.0	201.6	197.7
b	b	b	b	b	b	b	b	b	b	206.1	211.1	b	200.0	188.9	b	200.0	194.1
165.6	163.0	173.1	188.2	182.7	234.5	216.1	211.6	280.0	199.2	196.9	203.8	189.2	185.3	187.9	189.3	184.2	184.4
156.3	152.8	160.9	184.2	179.8	214.3	201.3	196.3	270.5	201.3	196.3	195.2	193.7	187.7	181.0	196.2	190.2	181.0
b	b	b	b	b	b	202.4	196.5	239.4	190.5	185.0	201.4	185.1	182.1	196.8	187.5	182.1	183.3
164.9	167.0	176.7	189.1	190.4	205.3	200.0	193.8	226.2	207.7	263.2	224.1	197.8	195.2	177.5	203.3	200.0	182.1
b	b	b	b	b	b	202.3	212.2	220.5	170.9	195.1	176.9	164.0	197.6	189.7	164.0	197.6	194.9
157.8	157.8	200.0	b	b	217.3	213.3	222.2	262.8	b	200.0	234.3	221.1	205.9	214.1	226.3	207.1	200.0
157.1	157.1	170.0	b	b	238.4	b	b	302.0	b	b	227.6	195.7	195.7	201.6	195.7	195.7	199.3
159.4	155.8	150.9	190.0	185.6	211.4	207.9	202.5	254.4	207.6	202.2	200.7	204.2	198.4	187.4	207.3	201.5	191.3
155.6	152.4	176.9	183.9	178.9	212.4	203.9	198.9	293.0	201.7	197.3	215.6	196.1	190.8	200.4	199.4	194.1	206.1
157.2	154.5	b	186.5	183.6	b	222.3	218.2	b	204.7	200.0	b	204.7	200.0	b	204.7	200.0	b
159.7	156.2	192.5	171.9	170.8	237.3	213.4	206.6	269.8	211.7	210.5	234.9	190.3	190.4	217.8	198.1	197.1	230.1
153.0	150.0	170.0	180.3	175.5	212.8	204.1	198.7	294.0	198.5	194.1	212.6	192.9	187.8	192.9	196.2	191.0	196.6
146.9	139.6	143.0	154.4	146.9	154.9	163.5	164.6[c]	175.6	170.1	171.4	176.7	165.6	176.3	166.0	167.1	171.8	164.4
b	b	141.0	b	b	147.4	b	b	177.4	b	b	176.0	b	b	168.0	b	b	162.3
150.0	147.2	166.1	163.9	153.1	172.9	195.6	220.0[c]	216.1	195.6	220.0	210.8	177.8	228.6	172.4	177.8	200.0	191.5
126.4	b	133.3	142.9	138.9	141.7	151.4	138.9	158.3	157.1	144.4	158.3	160.0	b	150.0	160.0	155.6	158.3
b	b	148.7	b	b	153.8	b	b	176.9	b	b	176.9	b	b	166.7	b	b	164.1
158.1	152.1	145.8	165.1	161.4	165.2	169.8	154.5	176.3	169.8	172.7	177.6	169.8	181.8	171.6	169.8	181.8	158.1
b	b	125.0	b	131.4	137.5	b	152.9	158.3	b	152.9	158.2	b	148.6	150.0	b	150.0	158.3
b	b	148.2	b	b	170.2	b	b	207.3	b	b	207.3	b	b	204.4	b	b	191.8
170.3	161.3	178.6	194.3	188.7	233.3	214.4	207.9	252.9	210.6	205.6	228.8	179.4	178.1	193.1	183.4	180.8	199.3
b	b	195.0	b	b	260.0	b	b	315.0	b	b	195.0	b	189.2	190.0	183.8	189.2	190.0
b	b	230.5	b	b	314.3	b	b	326.9	b	b	309.3	b	b	242.8	b	b	245.5
163.9	145.5	b	199.4	197.6	b	230.3	225.5	196.3	230.3	225.5	196.3	212.1	207.3	177.8	212.1	207.3	177.8
b	b	207.1	b	b	200.0	b	b	221.4	b	b	221.4	b	b	207.2	b	b	217.9
188.9	188.9	184.6	200.0	200.0	215.4	b	b	b	b	b	213.3	171.1	171.1	166.7	184.2	184.2	173.3
164.7	142.1	215.0	b	b	265.0	b	b	310.0	b	b	290.0	167.6	163.2	240.0	181.8	173.7	290.0
b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
164.1	160.0	168.5	184.6	180.0	207.9	180.0	180.0	252.8	180.0	180.0	224.7	180.0	180.0	181.6	180.0	180.0	181.6
170.0	165.5	138.2	b	b	b	225.0	214.3	212.4	225.0	214.3	182.5	170.0	161.9	149.9	175.0	169.0	169.6
b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b

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[b] No report.

[c] Corrected figure.

Table 19: Index Numbers of the Retail Price of Coal in Ton to November, 1924,

(July,

(National Industrial

	March, 1922			July, 1922			November, 1922			March, 1923		
	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
	Stove	Chestnut		Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
UNITED STATES	195.5	192.5	174.7	195.4	193.8	171.7	205.0	201.5	209.8	208.0	204.2	204.8
Eastern district	201.6	197.5	179.1	202.4	198.1	186.4	211.0	206.0	230.5	216.4	212.0	228.9
Albany, N. Y.	186.8	186.8	b	186.8	186.8	b	186.8	186.8	b	187.0	187.0	b
Baltimore, Md.	202.7	196.3	174.4	b	b	b	211.6	208.3	241.0	218.3	214.9	230.8
Boston, Mass.	201.7	195.1	175.5	201.7	195.1	175.6	215.1	208.1	255.3	215.1	208.1	255.3
Bridgeport, Conn.	210.8	205.3	b	227.0	221.1	b	258.1	251.3	b	267.6	260.5	b
Buffalo, N. Y.	193.6	186.8	216.7	b	b	b	198.5	192.7	225.0	198.5	192.7	233.3
Cambridge, Mass.	210.5	214.3	194.1	222.2	222.2	194.1	224.6[c]	228.6[c]	b	224.6	228.6	294.1
Fall River, Mass.	196.8	191.5	180.0	196.8	191.4	180.0	203.2	197.9	213.3	210.8	202.9	223.3
Lawrence, Mass.	206.3	200.0	210.0	206.3	200.0	210.0	206.3	200.0	280.0	b	b	b
Lowell, Mass.	209.5	209.5	b	212.9	212.9	b	212.9	212.9	b	225.8	b	b
Lynn, Mass.	b	b	b	b	b	b	206.4	200.0	240.5	206.4	200.0	240.0
Manchester, N. H.	194.0	192.5	165.6	191.2	192.1	207.5	218.2	216.0	220.8	218.0	216.4	220.8
Newark, N. J.	204.0	198.4	b	204.0	198.1	b	204.8	198.4	b	211.0	204.9	b
New Britain, Conn.	196.1	196.1	b	b	196.1	b	b	b	b	261.4	261.4	208.7
New Haven, Conn.	207.4	207.4	b	207.4	207.4	b	227.8	227.8	b	227.8	227.8	b
New York, N. Y.	193.1	186.3	192.8	196.1	188.9	230.8	203.2	195.9	250.0	204.4	197.1	237.2
Paterson, N. J.	207.2	203.1	187.5	207.2	203.1	212.5	214.9	210.6	237.5	214.9	210.6	212.5
Philadelphia, Pa.	206.6	203.2	173.7	207.5	203.1	189.4	212.2	208.8	181.6	221.2	217.6	198.9
Pittsburgh, Pa.	b	b	144.4	b	b	144.4	b	175.3	177.8	b	b	177.8
Portland, Me.	215.8	213.4	188.9	215.8	213.4	188.9	213.7	210.3	233.3	215.8	213.4	238.9
Providence, R. I.	210.2	210.2	166.3	208.4	203.3	174.4	220.4	215.6	235.7	221.6	216.7	240.8
Reading, Pa.	203.0	197.1	222.2	203.0	197.1	236.1	223.9	219.0	277.8	238.8	233.6	277.8
Rochester, N. Y.	197.8	191.2	225.8	197.8	191.4	b	197.8	191.2	233.9	197.8	191.2	241.9
Schenectady, N. Y.	210.8	203.0	160.0	197.1	194.9	160.0	210.0	202.2	210.0	201.1	197.4	200.0
Scranton, Pa.	b	b	b	b	b	b	b	b	b	b	b	b
Springfield, Mass.	195.1	192.0	188.9	196.7	190.4	188.9	204.9	201.6	277.8	214.6	211.2	244.4
Syracuse, N. Y.	187.3	180.6	b	184.6	180.1	b	183.2	176.8	b	187.3	183.9	b
Trenton, N. J.	199.3	195.6	b	198.5	194.9	b	208.2	204.4	b	223.0	219.0	b
Washington, D. C.	197.2	198.0	170.4	199.3	199.3	185.4	211.4	212.9	229.7	219.6	221.1	203.9
Wilmington, Del.	198.4	192.6	200.0	197.8	192.4	194.4	206.8	201.7	216.7	213.3	207.1	216.7
Middle western district	196.4	192.9	178.0	197.3	192.9	182.4	199.4	195.2	227.6	202.7	196.7	223.4
Chicago, Ill.	198.1	192.0	168.1	198.5	192.4	174.8	213.1	202.4	199.2	213.1	202.4	196.6
Cincinnati, Ohio	193.5	187.5	187.5	206.4	200.0	201.8	b	200.0	271.4	b	b	257.1
Cleveland, Ohio	192.7	189.1	178.3	189.5	183.5	183.7	192.7	186.8	239.0	210.0	203.7	245.9
Columbus, Ohio	213.3	201.6	187.4	200.0	200.0	186.2	b	217.7	255.0	b	212.5	250.6
Dayton, Ohio	b	187.9	155.6	b	b	183.3	b	b	238.9	b	200.0	233.3
Detroit, Mich.	187.1	183.2	175.9	193.4	185.3	186.2	204.3	200.0	244.8	206.4	202.1	237.9
Duluth, Minn.	193.7	187.7	161.9	193.7	187.7	171.4	193.7	187.7	228.6	193.7	187.7	228.6
Grand Rapids, Mich.	187.5	182.1	174.2	185.2	180.0	185.5	193.4	187.9	212.7	202.4	196.5	222.9
Indianapolis, Ind.	203.3	199.2	144.9	205.4	193.8	151.3	196.9	193.8	199.3	208.3	193.8	178.2
Kansas City, Kan.	174.4	195.1	184.6	174.4	195.1	169.2	174.4	178.0	200.0	167.4	175.6	184.6
Kansas City, Mo.	b	195.6	188.4	b	b	188.6	b	186.7	211.4	b	186.7	185.7
Louisville, Ky.	194.2	194.2	171.7	205.9	205.9	188.7	b	b	260.2	b	b	252.6
Milwaukee, Wis.	204.2	198.0	185.5	205.2	198.8	180.4	207.4	200.3	225.7	207.4	200.3	234.8
Minneapolis, Minn.	197.2	191.9	206.1	194.4	189.2	206.1	194.4	188.4	235.0	194.4	188.4	228.6
Omaha, Neb.	204.7	200.0	b	b	b	b	b	b	b	b	190.9	b
St. Louis, Mo.	198.1	197.1	221.9	199.4	197.1	210.8	198.1	196.1	243.4	204.4	200.2	241.8
St. Paul, Minn.	194.0	188.8	187.0	191.3	186.2	195.5	198.5	192.7	217.9	196.7	190.7	210.4
Far western district	167.1	171.8	163.7	157.7	169.2	147.4	168.9	190.4	156.1	165.6	164.2	152.5
Butte, Mont.	b	b	158.3	b	b	154.9	b	b	155.4	b	b	146.1
Denver, Col.	177.8	200.0	173.1	172.2	196.0	168.4	b	b	200.0	194.4	190.9	194.1
Los Angeles, Cal.	160.0	155.6	158.3	142.9	b	116.7	160.0	b	137.5	160.0	b	137.5
Portland, Ore.	b	b	164.1	b	b	153.8	b	b	153.8	b	b	153.8
Salt Lake City, Utah	169.8	181.8	162.2	169.8	181.8	157.6	200.0	190.4	167.8	162.8	190.4	155.8
San Francisco, Cal.	b	150.0	158.3	b	134.3	137.5	b	b	b	b	140.0	145.8
Seattle, Wash.	b	b	184.9	b	b	172.0	b	b	176.8	b	b	168.3
Southern district	180.1	178.1	179.8	185.6	184.4	171.7	205.7	192.1	205.7	196.4	191.7	196.5
Atlanta, Ga.	183.8	189.2	160.0	b	b	170.0	200.0	b	230.0	200.0	b	230.0
Birmingham, Ala.	b	b	186.2	b	b	165.5	b	b	227.6	b	b	206.7
Charleston, S. C.	212.1	207.3	166.7	212.1	207.3	166.7	212.1	207.2	177.8	212.1	207.3	177.8
Dallas, Tex.	b	b	217.9	b	b	200.0	b	b	217.9	b	b	217.9
Jacksonville, Fla.	184.2	184.2	173.3	184.2	184.2	173.3	b	b	200.0	b	b	200.0
Little Rock, Ark.	170.5	163.2	260.0	b	b	b	b	187.5	233.3	b	187.5	183.3
Macon, Ga.	b	b	b	b	b	b	b	b	b	b	b	b
Memphis, Tenn.	180.0	180.0	170.4	b	b	b	b	180.0	194.4	180.0	180.0	198.3
New Orleans, La.	167.5	165.9	148.5	165.0	166.7	152.0	b	195.2	166.7	b	204.8	166.7
Richmond, Va.	b	b	b	b	b	b	b	b	b	b	b	b

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[a] The report for June, 1918 represented the increase over June 1, 1914, for stove and chestnut anthracite and two kinds of bituminous coal; that for November, 1918, the increase over November 1, 1914. These have not been reproduced here.

LOTS FOR DOMESTIC USE, IN SPECIFIED CITIES, JULY, 1914 INCLUSIVE[a]—(*Continued*)

1914 = 100)

Conference Board)

July, 1923			November, 1923			March, 1924			July, 1924			November, 1924		
Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal	Anthracite		Bituminous Coal
Stove	Chestnut		Stove	Chestnut		Stove	Chestnut		Stove	Chestnut		Stove	Chestnut	
202.4	198.7	183.7	212.4	208.1	182.4	210.4	204.7	174.1	203.3	198.4	162.2	207.3	201.4	167.2
208.0	203.1	199.9	219.9	215.1	190.2	217.5	211.0	178.6	210.5	203.9	167.1	215.2	208.2	170.8
188.5	188.5	b	198.3	198.3	b	196.6	196.6	b	197.3	197.3	b	200.0	200.0	b
211.3	208.3	179.4	223.8	218.2	174.4	224.9	219.3	171.8	211.6	203.9	161.5	219.6	209.3	200.0
201.7	195.1	191.4	215.1	208.1	170.2	208.4	201.6	159.6	210.1	203.3	159.6	215.1	208.1	159.6
256.0	246.2	b	264.0	253.8	b	264.0	253.8	b	248.0	238.4	b	248.0	238.4	b
197.3	191.5	233.3	206.3	200.2	191.7	204.9	199.6	191.7	202.0	195.4	191.7	205.0	197.6	191.7
210.5	214.3	211.8	224.6	228.6	188.2	217.5	221.4	b	217.5	221.4	176.4	224.6	228.6	176.4
202.2	198.3	233.3	214.8	210.8	210.0	205.0	200.8	196.7	196.7	193.6	175.0	202.9	199.8	181.7
212.5	206.1	240.0	218.8	212.1	200.0	206.3	200.0	190.0	206.3	200.0	190.0	206.3	200.0	180.0
232.3	219.4	b	238.7	229.0	b	b	b	b	212.9	212.9	b	b	b	b
200.0	193.8	190.0	206.4	200.0	170.0	206.4	200.0	170.0	193.5	187.5	150.0	206.4	200.0	150.0
206.0	204.4	181.4	211.8	205.9	212.4	213.9	202.0	212.4	209.0	200.0	183.4	210.9	202.0	193.1
203 0	197.1	b	217.2	210.9	b	215.4	208.7	b	210.4	204.0	b	213.7	206.5	b
222.2	209.2	147.8	b	b	b	228.8	228.8	147.8	205.9	199.3	130.4	215.7	215.7	134.8
220.1	220.1	b	233.3	233.3	b	235.1	235.1	b	214.8	214.8	b	225.9	225.9	b
202.0	194.7	224.4	213.2	205.5	211.5	213.2	205.5	198.7	206.4	199.0	198.7	210.7	201.9	198.7
214.9	210.6	212.5	228.9	232.3	175.0	218.1	213.8	175.0	208.8	204.7	168.8	216.9	210.6	187.5
223.0	214.0	189.4	235.4	228.0	163.6	226.7	223.0	189.4	222.9	213.9	173.7	224.9	216.7	173.7
b	b	b	b	b	b	b	170.1	144.4	b	159.8	144.4	b	159.8	133.3
213.7	210.3	222.2	225 5	223.1	200.0	225.5	219.8	183.3	222.2	216.6	165.0	225.5	223.1	166.9
212.5	207.8	214.3	231.3	226.7	201.0	229.3	224.2	180.6	217.7	213.3	170.4	226.1	220.0	174.4
209.0	204.4	194.4	223.9	219.0	236.1	223.9	219.0	222.2	212.7	208.0	208.3	220.1	215.3	208.3
197.8	191.2	204.8	206.9	200.4	196.8	206.9	200.4	196.8	207.0	197.9	196.8	207.1	201.2	188.7
196.3	192.8	160.0	206.6	202.9	150.0	206.6	202.9	150.0	203.7	200.0	130.0	206.6	202.9	150.0
b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
211.0	206.4	185.7	215.9	211.2	181.0	211.4	206.9	161.9	203.1	198.7	147.6	210.8	205.6	147.6
184.6	180.1	b	194.9	190.2	b	194.9	190.2	b	191.9	187.3	b	194.9	190.2	b
208.2	204.4	b	223.0	219.0	b	220.4	212.1	b	220.4	209.8	b	224.4	212.1	b
209.4	207.4	192.7[c]	222.3	220.7	162.0	222.3	220.7	167.6	209.4	207.4	164.8	214.5	210.9	164.8
211.1	204.9	205.6	228.3	221.7	194.4	229.8	221.4	183.3	214.8	206.4	172.2	218.6	209.3	172.2
198.7	195.6	197.6	205.4	203.3	191.0	202.9	202.4	183.2	197.4	196.5	167.2	201.3	199.3	173.7
210 1	200.0	186.6	218.6	211.0	178.2	212.0	205.5	156.6	208.2	201.8	158.7	211.4	201.8	161.3
b	200.0	228.6	b	206.3	228.6	212.9	206.3	207.1	212.9	206.3	185.7	206.4	203.1	185.7
196.0	193.4	222.0	206.0	203.3	215.6	206.0	202.2	196.3	189.4	186.9	184.9	196.0	193.4	190.4
b	211.3	213.8	b	240.0	206.9	b	227.4	198.3	b	221.0	178.4	b	221.0	181.9
b	200.0	207.4	b	206.1	192.6	b	200.0	177.8	b	187.9	162.5	b	193.9	154.2
206.4	202.1	224.1	212.9	208.4	200.0	202.2	195.8	189.7	193.5	187.5	180.6	197.8	191.6	170.7
193.7	187.7	166.7	202.5	196.3	161.9	202.5	196.3	161.9	200.0	193.9	161.9	202.5	196.3	147.6
198.8	193.0	185.0	202.4	196.5	188.9	196.4	190.8	168.6	184.5	179.2	156.1	190.4	185.0	170.8
200.0	201.6	160.8	206.3	212.7	147.5	b	220.5	153.8	203.2	205.6	135.9	209.5	210.4	162.5
167.4	168.3	179.4	155.8	163.4	169.2	155.8	192.7	169.2	137.2	178.0	164.1	148.8	182.9	174.4
b	186.7	185.7	b	195.6	177.1	b	195.6	182.9	b	186.7	182.9	b	195.6	182.9
b	211.4	209.1	b	b	219.9	b	b	219.9	217.6	214.4	182.6	217.6	217.6	190.9
202.8	196.8	189.6	212.7	204.3	191.0	212.7	204.9	177.8	210.1	201.8	153.1	212.7	204.3	158.9
194.4	187.6	215.1	201.7	195.4	205.4	201.7	195.4	184.7	198.9	191.9	184.4	201.1	194.1	193.7
b	181.8	b	b	195.4	b	b	190.9	b	b	181.8	b	b	190.9	b
200.2	199.2	206.9	210.7	209.4	213.7	210.7	209.4	221.2	198.1	197.1	191.8	204.4	203.3	202.8
191.3	184.6	185.9	199.2	192.3	180.6	199.3	192.4	176.3	195.6	188.8	169.7	197.8	191.0	167.7
163.0	150.0	149.4	164.5	144.2	155.9	165.8	146.4	150.0	164.4	145.8	145.0	166.6	155.3	148.1
b	b	149.7	b	b	153.9	b	b	149.0	b	b	145.1	b	b	148.6
183.3	181.8	189.5	177.8	150.0	200.0	166.7	146.0	155.8	169.4	154.0	167.0	175.7	158.0	172.0
154.3	b	129.2	158.8	b	119.2	b	b	b	152.9	b	109.6	155.9	b	109.6
b	b	143.6	b	b	153.8	b	b	164.1	b	b	148.7	b	b	159.0
175.0	b	156.0	152.2	b	155.3	165.1	156.5	132.6	175.0	b	149.3	167.4	163.6	148.4
b	140.0	145.8	b	140.0	145.8	b	140.0	150.0	b	140.0	129.2	b	142.9	137.5
b	b	170.0	b	b	173.7	b	b	171.2	b	b	172.4	b	b	172.4
201.9	192.9	176.4	211.1	204.2	181.1	210.2	205.9	174.3	195.7	191.9	164.8	202.1	196.4	174.1
200.0	200.0	180.0	212.6	218.1	179.4	214.1	218.1	179.4	194.6	197.3	156.4	194.6	197.3	161.5
b	b	208.6	b	b	237.9	b	b	216.7	b	b	210.3	b	b	213.8
212.1	207.3	177.8	b	b	b	212.1	207.3	177.8	212.1	207.3	163.0	212.1	207.3	163.0
b	b	b	b	b	b	b	b	b	b	b	200.0	b	b	200.0
194.7	194.7	186.7	194.7	b	160.0	184.2	184.2	120.0	184.2	184.2	106.7	194.7	194.7	133.3
b	200.0	183.3	b	212.5	200.0	b	212.5	200.0	b	b	b	b	b	183.3
b	b	b	b	b	180.0	b	b	180.0	b	b	170.0	b	b	180.0
b	180.0	157.8	b	185.0	157.8	b	190.0	161.1	b	190.0	161.1	b	190.0	161.1
b	b	143.1	217.5	207.1	170.3	220.0	209.5	178.2	195.0	185.7	160.6	205.0	195.2	174.5
b	b	b	b	b	b	b	b	b	b	b	b	b	b	b

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[b] No report.

[c] Corrected figure.

Light

As pointed out in Chapter II, a beginning was made in November, 1920, toward collecting reports on a comprehensive basis regarding the cost of light, the change in costs prior to that date having been estimated on less definite and complete data than were available thereafter. The reports available at that time indicated some large increases, especially in charges for gas. The next year, more cities were included and further increases were reported for gas, while electricity charges decreased. Little or no account was taken of electricity charges, however, due to the fact that in 1914 far more wage earners' families used gas for lighting than used electricity. In 1922, however, electricity was given more consideration, which reduced the index slightly, since the cost of electricity throughout has increased less than the cost of gas or has decreased, so far as rates are concerned. In 1923, for the first time, the increases for the separate cities were weighted by population groups so that the largest cities had the heaviest weights and the light index was computed by weighting gas two and electricity one. This method further reduced the index number for the cost of light for the country as a whole.

The increase in the cost of light is somewhat greater, in 1924, however, than would have been the case had account been taken of electricity throughout the series, 'but the point at which electricity is tied in is necessarily arbitrary since it clearly represents a recognition of a changing standard of living. Starting in 1922, this has been continued in 1923 and 1924 on the basis of a two to one ratio. The total increase since July, 1914, is, however, necessarily more heavily weighted by the change in gas charges, since the increase in these up to 1922 forms the basis on which subsequent changes are figured. In any event, the importance of light in the total is so small as to affect but little if at all the index number for the cost of living as a whole.

The trend of light costs was apparently upward through 1921. After that, rates were reduced in some instances; in others, extra charges were removed so that in 1924 the average cost was lower than in 1920. At no time, however, have light costs reached so high a figure, relative to the 1914 level, as costs of other items in the family budget. Light takes less than 2% of the average family outlay; electricity, the rates for which have actually decreased, less than 1%. These facts should be borne in mind in any analysis of combined fuel and light costs, since it is apparent that coal prices, which weight so much heavier in the total and had advanced so much higher, were responsible for most of the increase in the cost of this item.

Sundries

A large group of goods and services make up the sundries item in a normal cost of living budget. Together these require about one-fifth of the average family outlay. The trend in the cost of most of these was upward until the end of 1920, when decreases began, to continue until the end of 1922, when another upward movement started. In other words, payment for services, particularly, such as carfares and doctor's fees, as well as insurance premiums and contributions to church and charity for the most part advanced slightly after the cost of living as a whole went up. In some instances, these later declined after the cost of living went down; carfares, for example, were reduced, and insurance and contributions, which are dependent to a considerable extent on changes in the retail price level generally, fell as prices fell. On the other hand, organization dues and doctor's fees in 1924 were apparently still at the highest level of 1921.

The money cost of these various sundries on the basis of the weekly allowance in July, 1914, is shown for all of the dates on which the Board has comprehensive data, in Table 20.[1] These are reproduced as index numbers in Table 21.

Food

Food ordinarily requires approximately twice as much of the average family's total expenditures as any other major item. Changes in the cost of food are, therefore, of more importance in their influence on the changes in the cost of

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[1] The basis of computing changes in the cost of sundries was changed in 1920, hence comparable data start at that time.

TABLE 20: AVERAGE WEEKLY ALLOWANCE FOR SUNDRIES FOR FAMILIES OF AMERICAN WAGE EARNERS ON SPECIFIED DATES, JULY, 1914 TO NOVEMBER, 1924, INCLUSIVE, BY SEPARATE ITEMS

(National Industrial Conference Board)

Item	July, 1914	March, 1920	July, 1920	November, 1920	March, 1921	July, 1921	November, 1921	March, 1922	July, 1922	November, 1922	March, 1923	July, 1923	November, 1923	March, 1924	July, 1924	November, 1924
Carfare	$.25	$.35	$.35	$.37	$.37	$.39	$.40	$.40	$.40	$.37	$.37	$.37	$.37	$.37	$.37	$.38
Medical care																
Doctors	.35	.58	.59	.68	.69	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70
Drugs	.15	.24	.24	.25	.23	.23	.20	.20	.20	.21	.22	.22	.25	.25	.25	.27
Reading	.60	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Recreation	.45	.95	.96	.96	.96	.96	.95	.95	.95	.95	.95	.95	.95	.95	.93	.93
Insurance	.50	.92	.98	1.03	.98	.96	.88	.85	.85	.85	.85	.85	.85	.85	.85	.85
Household	.60	1.35	1.35	1.35	1.15	1.15	1.15	1.05	1.00	1.05	1.10	1.10	1.10	1.12	1.12	1.13
Church and charity	.50	.87	.87	.96	.96	.95	.85	.85	.85	.85	.85	.85	.85	.85	.85	.85
Dues	.35	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
Tobacco	.40	.70	.70	.70	.70	.70	.62	.58	.58	.54	.54	.54	.54	.54	.54	.54
Candy	.10	.18	.19	.19	.17	.17	.15	.15	.15	.16	.17	.17	.17	.17	.17	.17
All items	$4.25	$7.79	$7.88	$8.14	$7.86	$7.86	$7.55	$7.38	$7.33	$7.28	$7.35	$7.35	$7.38	$7.40	$7.36	$7.42

TABLE 21: INDEX NUMBERS OF ITEMIZED SUNDRIES ON SPECIFIED DATES, JULY, 1914 TO NOVEMBER, 1924, INCLUSIVE

(July, 1914 = 100)

(National Industrial Conference Board)

Item	July, 1914	March, 1920	July, 1920	November, 1920	March, 1921	July, 1921	November, 1921	March, 1922	July, 1922	November, 1922	March, 1923	July, 1923	November, 1923	March, 1924	July, 1924	November, 1924
Carfare	100	140	140	148	148	156	160	160	160	148	148	148	148	148	148	152
Medical care																
Doctors	100	166	169	194	197	200	200	200	200	200	200	200	200	200	200	200
Drugs	100	160	160	167	153	153	133	133	133	140	147	147	167	167	167	180
Reading	100	192	192	192	192	192	192	192	192	183	183	183	183	183	183	183
Recreation	100	211	213	213	213	213	211	211	211	211	211	211	211	211	207	207
Insurance	100	184	196	206	196	192	176	170	170	170	170	170	170	170	170	170
Household	100	225	225	225	192	192	192	175	167	175	183	183	183	187	183	188
Church and charity	100	174	174	192	192	190	170	170	170	170	170	170	170	170	170	170
Dues	100	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143
Tobacco	100	175	175	175	175	175	155	145	145	135	135	135	135	135	135	135
Candy	100	180	190	190	170	170	150	150	150	160	170	170	170	170	170	170
All items	100	183	185	192	185	185	178	174	172	171	173	173	174	174	173	175

living as a whole than changes in the cost of any other major item. Within the food allowance itself, also, different articles have a differing importance. The tabulation on page 73 shows the relative quantities of each article of food annually consumed but does not show the proportion of the total expenditure required for each. This is not given in the report of the 1918 investigation of the United States Bureau of Labor Statistics, although the quantity consumption is given, and, for the items other than food, expenditures also.[1] The 1901 investigation showed relative expenditures,[2] however, and although it is possible that these were distributed somewhat differently in later years than when the survey was made, it is probable that at any time since then meat has required the greatest outlay of any single group of foodstuffs, with eggs, milk, butter, bread, and the cereals, potatoes and sugar close rivals; other fruits and vegetables, condiments, tea and coffee are less important. Thus, changes in the cost of certain of these articles have much more effect on total necessary expenditures and resulting well-being than have others.

Separate Items

Table 22 shows the relative retail cost of food as a whole[3] and of each of 22 important items separately from 1913 by months through December, 1924.[4] Careful study of this table reveals that during the period of highest prices, beef prices did not rise so high as all food combined or as certain other important articles of diet. Since 1921 the choicer cuts of beef have been slightly higher, relatively, than all items combined, but the less expensive cuts have been very little above their pre-war selling prices. Hens, pork, ham and bacon prices went higher and stayed up longer than food prices generally. Lard prices went very high but came down rapidly after 1919 and in January, 1922, were actually below the pre-war level. The dairy products, also an important item of food, showed somewhat differing tendencies. Milk prices advanced although not so much as food prices generally; but when the general trend turned downward, milk prices lagged, so that since the end of 1920 they have been above the general level. Cheese prices followed the same trend, but only in their seasonal fluctuations did butter quotations at any time go above the general food price level. Egg prices also were most markedly advanced in the season of their scarcity and below the general level at other times of the year.

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[1] Bulletin No. 357, *op. cit.*, pp. 108–455.

[2] Eighteenth Annual Report of the Commissioner of Labor, *op. cit.*, pp. 649–650.

[3] Twenty-two articles until January, 1921; on that date and thereafter, 43.

[4] *Monthly Labor Review*, February, 1921, pp. 19–21; *ibid.*, February, 1923, p. 69; *ibid.*, September, 1924, p. 6; *ibid.*, February, 1925, p. 17.

Where, then, did the large increase in food prices come from and how important was it in the average family's total expenditure for food? The largest single increases recorded for any important item of diet were the advance of 266% in the price of potatoes in 1917 and of 506% in 1920, and the rise of 385% in sugar prices in 1920. Less spectacular but more sustained was the increase for corn meal, varying from 172% in 1917 to 133% in 1920, the period when corn meal was being substituted for wheat flour; and the very high flour prices prevailing during the same period. Bread prices never reflected the advance in flour prices to the same degree, although during most of the decade under consideration bread prices were higher than food prices generally. Tea and coffee prices advanced in 1917, coffee prices quite sharply in 1919 and 1920, but the total expenditure for these in a year is not of great relative importance. Apparently, then, food price increases have been due to different movements at different times. During the war period sugar, the starches and fats sent prices up and kept them high; since then, the price of no single article has been so inflated and the level of all, for the most part, has been more uniform.

Seasonal variations at times are quite marked in the prices of certain foodstuffs and these are, in turn, reflected in some instances in the food price index as a whole. The most marked example of seasonal fluctuation is seen in the prices of strictly fresh eggs which, no matter whether the general trend is up or down, always drop markedly in the early spring and rise to a high point in the early winter. The next most marked seasonal trend appears in potato prices, which are always high in the summer when only new potatoes are in the market and fall to a low point in the fall and winter.

TABLE 22: INDEX NUMBERS OF RETAIL PRICES OF THE MONTHS, 1913 TO

(Average for year

(United States Bureau

Year and Month	Sirloin Steak	Round Steak	Rib Roast	Chuck Roast	Plate Beef	Pork Chops	Bacon	Ham	Lard
1913: Av. for year	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
January	94	92	95	93	92	89	94	93	97
February	94	93	95	93	93	90	95	94	98
March	97	96	98	98	98	97	97	97	99
April	101	99	101	101	101	103	99	99	100
May	101	100	101	101	101	100	100	99	100
June	102	101	102	102	101	99	101	102	100
July	104	104	102	103	101	103	104	104	101
August	104	104	102	103	101	104	105	106	102
September	103	104	101	103	102	108	104	104	102
October	101	104	101	103	102	107	103	102	101
November	100	102	100	102	102	102	101	100	101
December	99	101	100	101	102	97	99	99	100
1914: Av. for year	**102**	**106**	**103**	**104**	**104**	**105**	**102**	**102**	**99**
January	99	102	100	102	102	99	98	98	100
February	99	102	101	103	102	100	98	99	99
March	100	103	101	102	102	100	99	99	99
April	100	103	102	103	102	103	99	99	99
May	102	105	102	103	103	106	99	99	98
June	103	106	103	104	103	103	100	100	97
July	106	109	105	106	104	106	101	103	97
August	110	113	108	109	107	119	107	108	99
September	107	110	105	108	107	113	108	108	99
October	103	107	104	106	106	110	106	105	98
November	100	105	103	104	105	104	104	102	99
December	101	103	101	103	103	93	103	100	97
1915: Av. for year	**101**	**103**	**101**	**101**	**100**	**96**	**100**	**97**	**93**
January	100	102	101	101	102	88	101	98	97
February	98	100	100	99	101	85	99	96	97
March	97	99	99	98	100	85	98	95	96
April	99	100	100	99	100	94	98	94	96
May	101	103	101	101	101	99	98	95	96
June	103	105	103	103	101	98	98	97	95
July	105	107	104	103	101	100	100	98	93
August	104	107	104	103	101	103	100	98	89
September	104	106	103	102	101	107	100	97	88
October	103	104	102	101	99	110	101	99	91
November	101	102	101	99	98	99	101	100	92
December	99	101	100	99	98	87	101	100	92
1916: Av. for year	**108**	**110**	**107**	**107**	**106**	**108**	**106**	**109**	**111**
January	101	102	101	99	99	89	101	101	93
February	101	102	102	99	100	92	101	102	94
March	104	104	104	103	102	104	103	104	96
April	106	108	106	106	105	107	104	107	100
May	109	112	110	109	107	109	105	109	106
June	113	117	113	113	111	110	107	110	108
July	113	116	112	112	109	111	107	111	110
August	112	115	111	110	107	116	108	111	111
September	111	115	110	110	107	125	110	114	118
October	108	111	108	108	106	118	110	114	123
November	106	108	106	107	106	111	111	114	135
December	106	107	106	106	106	106	110	114	137

PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, BY DECEMBER, 1924

1913 = 100)

of Labor Statistics)

Hens	Eggs	Butter	Cheese	Milk	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Coffee	Tea	22 Weighted Articles
100	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
95	108	107	100	100	100	100	99	99	91	106	100	100	98
97	91	108	100	100	100	100	98	99	90	100	100	100	97
100	77	108	100	100	100	100	98	99	88	99	100	100	97
104	73	106	100	100	100	100	98	99	87	98	100	100	98
104	76	94	99	99	100	101	98	99	91	97	100	100	97
103	81	92	99	99	100	101	98	99	104	97	100	100	98
102	87	91	99	99	100	101	98	100	110	100	100	100	100
101	96	92	100	99	100	100	100	100	109	102	100	100	101
101	109	98	100	100	100	100	102	100	110	104	100	100	102
100	120	100	101	101	100	99	103	100	106	101	100	100	104
97	144	101	102	102	100	99	104	100	107	99	100	100	105
98	138	104	102	102	100	99	104	100	106	98	100	100	104
102	**102**	**94**	**104**	**100**	**112**	**104**	**205**	**101**	**108**	**108**	**100**	**100**	**102**
100	126	104	104	102	110	98	104	100	108	95	99	100	104
104	106	93	104	102	110	99	103	100	108	94	99	100	101
105	90	92	105	101	110	99	103	100	107	93	100	100	99
108	74	86	104	100	110	99	103	100	105	91	100	100	97
106	77	85	103	100	110	99	103	100	112	91	100	101	98
103	82	88	103	100	100	99	103	100	132	93	100	101	99
103	87	89	103	100	110	98	103	101	155	95	99	101	102
104	96	94	103	100	112	106	105	101	111	143	100	101	107
103	107	98	104	100	114	113	109	101	105	145	100	101	107
100	113	98	104	101	114	111	109	101	89	132	99	101	105
97	131	103	104	101	114	112	109	101	83	113	99	101	105
94	139	103	104	101	116	113	107	101	84	110	99	101	105
97	**99**	**93**	**105**	**99**	**124**	**126**	**198**	**104**	**89**	**120**	**101**	**100**	**101**
85	129	101	105	101	120	124	109	104	85	110	101	100	103
97	98	98	106	100	126	138	110	104	84	118	101	100	101
99	74	94	106	99	126	136	110	104	82	120	101	100	98
100	95	94	105	99	126	137	109	104	86	122	101	100	98
101	76	91	106	98	128	139	109	104	89	124	101	100	100
98	78	90	106	98	128	130	109	104	99	126	101	100	100
97	81	90	105	98	126	125	108	104	85	127	101	100	100
97	88	88	103	99	126	124	108	104	82	123	101	100	100
97	101	88	103	99	124	117	108	104	79	118	100	100	100
97	117	92	104	100	124	113	108	104	94	111	100	100	103
95	133	95	105	100	122	113	107	104	97	119	100	100	104
95	135	101	107	100	122	114	107	104	106	124	100	100	105
111	**109**	**103**	**117**	**102**	**130**	**135**	**113**	**105**	**159**	**146**	**100**	**100**	**114**
101	123	100	110	100	122	120	107	105	136	123	100	100	107
104	101	99	112	100	124	125	108	104	141	125	100	100	106
107	82	105	113	100	124	120	107	104	140	137	100	100	107
111	79	108	113	99	124	119	108	104	138	145	100	100	109
113	82	97	112	99	124	119	108	104	140	156	100	100	109
114	87	95	111	99	124	117	108	105	167	158	100	100	112
113	93	93	110	100	124	116	108	105	134	160	100	100	111
112	105	95	111	101	126	134	110	105	141	155	100	100	113
113	120	102	116	102	136	148	113	105	161	141	100	100	118
114	132	109	122	105	144	155	117	105	165	149	100	100	121
112	149	114	132	109	150	174	126	105	198	157	100	100	126
112	154	118	140	112	138	167	131	105	198	151	100	100	126

TABLE 22: INDEX NUMBERS OF RETAIL PRICES OF THE MONTHS, 1913 TO

(Average for year
(United States Bureau

Year and Month	Sir-loin Steak	Round Steak	Rib Roast	Chuck Roast	Plate Beef	Pork Chops	Ba-con	Ham	Lard
1917: Av. for year	**124**	**130**	**126**	**131**	**130**	**152**	**152**	**142**	**175**
January	109	111	109	109	108	113	110	114	136
February	113	117	114	116	116	125	114	118	138
March	116	119	118	128	121	133	123	125	151
April	125	130	127	131	132	146	141	136	167
May	127	133	130	134	135	146	155	144	176
June	129	135	132	137	137	148	158	145	177
July	129	137	130	137	136	151	159	147	174
August	130	138	129	136	134	164	160	147	176
September	131	133	131	137	135	185	164	152	188
October	130	138	130	136	136	185	178	159	198
November	124	133	127	132	134	165	179	159	207
December	126	134	128	134	134	161	181	161	211
1918: Av. for year	**153**	**165**	**155**	**166**	**170**	**186**	**196**	**178**	**211**
January	129	137	130	138	142	163	180	162	208
February	132	141	133	142	146	160	179	163	209
March	133	143	135	145	150	161	181	164	210
April	144	155	148	159	164	170	183	166	209
May	157	170	161	174	181	175	187	170	208
June	168	182	169	184	188	177	191	173	206
July	166	181	168	182	185	180	194	181	206
August	163	178	165	177	179	201	200	180	209
September	164	178	165	178	181	220	208	193	213
October	161	175	163	174	178	216	214	193	216
November	159	173	162	172	175	206	216	195	216
December	159	171	161	171	174	197	217	198	216
1919: Av. for year	**164**	**174**	**164**	**169**	**167**	**201**	**205**	**209**	**234**
January	162	175	165	175	181	193	217	199	211
February	162	174	165	174	181	180	205	193	203
March	165	177	169	178	183	184	203	191	211
April	172	182	175	184	187	197	212	197	223
May	175	187	178	186	186	205	210	203	246
June	170	181	171	176	174	202	212	205	254
July	171	183	169	173	168	220	215	211	266
August	166	177	164	166	160	223	214	212	266
September	161	170	158	158	150	219	206	205	242
October	157	165	155	153	145	211	196	195	228
November	155	162	153	151	143	200	189	188	231
December	154	161	153	152	143	181	186	186	221
1920: Av. for year	**172**	**177**	**168**	**164**	**151**	**201**	**194**	**206**	**187**
January	159	166	159	158	152	178	186	187	215
February	160	167	159	157	152	180	186	188	204
March	161	168	161	157	150	186	186	190	192
April	170	179	169	166	157	206	191	199	191
May	171	179	169	166	155	202	195	206	189
June	182	191	176	174	157	194	200	215	185
July	192	202	181	179	158	208	203	222	184
August	186	196	176	172	154	219	203	223	177
September	185	193	175	170	152	238	202	224	177
October	177	188	168	162	147	238	202	222	185
November	171	178	165	158	146	210	196	212	183
December	156	160	152	145	136	157	176	186	162

PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, BY DECEMBER, 1924—(*Continued*)

1913 = 100)

of Labor Statistics)

Hens	Eggs	Butter	Cheese	Milk	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Coffee	Tea	22 Weighted Articles
134	**139**	**127**	**150**	**125**	**164**	**211**	**192**	**119**	**253**	**169**	**101**	**107**	**146**
119	158	118	141	112	140	171	132	105	225	146	100	100	128
126	147	122	142	112	142	171	136	104	290	148	100	100	133
129	101	121	146	112	144	174	137	104	297	160	101	101	133
136	112	133	150	114	150	206	154	108	339	175	101	101	145
138	116	122	153	117	168	266	178	121	352	183	101	103	151
136	119	123	153	119	170	246	182	125	366	170	101	104	152
131	122	120	149	125	176	220	195	123	246	166	103	110	146
131	134	124	148	128	182	229	219	122	206	181	102	111	149
142	152	129	152	132	176	223	272	124	172	179	102	112	153
146	166	133	158	143	176	214	232	128	178	177	102	113	157
138	168	138	156	144	176	208	235	131	183	174	102	114	155
143	184	142	156	147	166	205	235	133	178	172	102	114	157
177	**165**	**151**	**162**	**156**	**175**	**203**	**227**	**148**	**188**	**176**	**102**	**110**	**167**
154	195	148	156	151	168	200	233	134	188	173	102	115	160
170	182	151	158	151	170	200	233	236	188	193	102	112	161
[a]	128	144	159	151	171	200	240	138	147	167	102	113	154
[a]	123	132	154	148	175	200	237	139	129	165	101	117	154
178	123	133	151	148	177	200	233	141	129	165	101	117	158
177	123	133	150	146	179	203	223	144	171	165	101	119	162
178	142	137	152	148	179	203	223	148	229	167	101	120	167
181	155	141	157	153	177	206	227	154	229	169	101	121	171
185	170	155	163	161	177	206	230	157	229	175	102	122	178
183	186	170	174	166	175	203	227	161	206	193	102	124	181
185	215	174	184	173	175	203	217	161	194	196	103	125	183
180	235	190	193	176	175	203	213	160	188	196	109	124	187
193	**182**	**177**	**193**	**174**	**179**	**218**	**213**	**174**	**224**	**205**	**145**	**129**	**186**
188	218	184	201	175	175	200	207	159	188	196	117	127	185
186	147	149	185	174	175	203	200	164	182	195	123	126	172
193	140	174	183	172	175	206	197	154	171	193	126	129	175
202	143	186	190	169	175	218	200	154	182	193	129	128	182
204	154	177	191	167	175	227	207	154	194	193	136	128	185
200	155	165	192	167	177	227	210	159	224	193	143	129	184
197	164	164	195	169	179	227	217	168	282	198	155	130	190
196	174	167	197	174	180	224	220	178	294	202	160	130	192
194	183	172	195	176	180	221	223	190	253	200	164	130	188
189	209	186	192	180	180	221	220	199	224	207	163	131	189
184	235	197	195	184	182	224	220	202	229	227	164	131	192
184	261	204	196	188	182	233	220	202	253	264	164	127	197
210	**197**	**183**	**188**	**188**	**205**	**245**	**217**	**200**	**371**	**353**	**158**	**135**	**203**
197	240	194	196	187	195	245	220	208	318	324	165	132	201
210	199	190	196	188	198	245	217	210	353	342	165	131	200
215	161	196	194	187	200	242	217	211	400	340	165	135	200
224	153	199	194	183	200	245	217	214	535	367	165	135	211
221	153	187	194	182	205	264	223	215	565	462	165	136	215
216	155	175	189	182	211	267	230	215	606	485	165	136	219
211	166	177	186	188	213	264	233	214	524	482	165	137	219
212	184	175	183	191	213	255	230	210	294	416	162	137	207
214	206	179	184	193	213	252	227	202	229	333	153	137	203
207	234	180	184	194	211	236	213	185	200	253	146	133	198
201	250	181	180	194	207	221	197	163	194	235	139	135	193
189	268	162	176	189	193	200	183	152	188	191	133	133	178

[a] No hens sold in this month by order of Food Administration.

Table 22: Index Numbers of Retail Prices of the Months, 1913 to

(Average for year

(United States Bureau

Year and Month	Sirloin Steak	Round Steak	Rib Roast	Chuck Roast	Plate Beef	Pork Chops	Bacon	Ham	Lard
1921: Av. for year	**153**	**154**	**147**	**133**	**118**	**166**	**158**	**181**	**114**
January	159	163	157	148	140	171	169	180	141
February	151	153	148	138	129	156	166	179	131
March	154	157	152	141	130	168	155	181	124
April	157	160	154	140	127	177	164	183	116
May	158	160	153	138	124	167	161	181	106
June	157	160	151	135	117	162	159	182	103
July	158	161	148	129	109	163	160	190	106
August	157	160	147	130	112	181	162	197	115
September	153	154	144	128	110	179	159	191	113
October	147	148	139	124	109	171	153	180	109
November	141	139	135	120	106	152	147	170	105
December	139	138	135	120	106	145	143	165	101
1922: Av. for year	**147**	**145**	**139**	**123**	**106**	**157**	**147**	**181**	**108**
January	139	136	135	119	106	138	139	164	97
February	139	135	134	118	106	140	140	173	101
March	141	138	136	121	107	149	144	185	109
April	143	141	138	122	107	157	147	188	107
May	148	146	141	124	107	164	147	191	108
June	151	150	142	126	107	161	150	193	109
July	154	153	144	127	106	164	150	194	109
August	154	153	142	125	104	167	150	189	109
September	152	151	142	125	104	173	150	180	109
October	151	148	141	124	106	174	151	177	111
November	147	144	139	123	105	157	151	172	111
December	145	141	138	121	105	140	149	169	111
1923: Av. for year	**153.9**	**150.2**	**143.4**	**126.3**	**106.6**	**144.8**	**144.8**	**169.1**	**112.0**
January	146.5	141.7	138.9	122.5	106.6	139.5	147.4	167.7	110.1
February	146.1	141.3	138.9	121.9	105.8	136.7	145.9	167.3	110.1
March	146.9	142.2	139.4	121.9	105.8	134.8	145.2	167.3	110.1
April	149.2	144.8	140.4	123.1	105.0	135.2	144.8	167.7	110.8
May	152.4	148.0	142.4	124.4	105.0	142.9	144.8	168.4	109.5
June	157.9	154.7	145.5	127.5	104.1	142.4	144.4	168.8	108.9
July	161.4	159.2	148.0	130.0	105.8	148.6	144.8	171.0	108.2
August	161.8	159.2	147.5	130.0	105.0	152.9	145.2	172.1	108.2
September	161.8	159.2	148.5	131.3	108.3	174.8	145.9	173.2	113.3
October	157.9	154.3	146.0	130.0	108.3	162.9	145.6	172.5	117.7
November	153.2	148.4	142.9	127.5	107.4	137.6	142.6	169.1	119.6
December	152.0	147.5	142.9	127.5	107.4	126.2	138.9	166.2	119.6
1924: Av. for year	**155.9**	**151.6**	**145.5**	**130.0**	**109.1**	**146.7**	**139.6**	**168.4**	**120.3**
January	153.9	149.3	144.4	129.4	109.9	130.5	137.8	166.2	118.4
February	152.4	148.0	142.9	127.5	109.9	127.1	135.6	165.1	113.9
March	153.1	148.4	144.4	128.8	109.9	128.1	134.4	163.6	110.8
April	155.9	150.7	146.5	130.6	109.9	136.7	134.1	164.7	108.9
May	159.8	155.2	148.5	133.1	110.7	142.4	133.7	164.7	108.2
June	160.2	156.1	148.5	132.5	109.1	143.8	134.1	165.8	107.0
July	160.2	155.2	147.0	131.3	108.3	144.2	134.8	166.2	108.2
August	160.2	156.1	147.0	131.3	108.3	165.7	141.9	173.2	122.2
September	158.3	153.8	146.5	130.6	109.1	170.5	145.6	174.3	126.6
October	155.9	151.1	144.4	129.4	108.3	178.6	148.5	175.1	135.4
November	152.4	147.5	142.4	127.5	109.1	150.5	148.5	174.7	141.8
December	150.4	145.3	141.4	126.3	108.3	139.5	147.8	173.2	139.9

PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, BY DECEMBER, 1924—(*Continued*)

1913 = 100)

of Labor Statistics)

Hens	Eggs	Butter	Cheese	Milk	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Coffee	Tea	22 Weighted Articles
186	**148**	**135**	**154**	**164**	**177**	**176**	**150**	**109**	**182**	**145**	**122**	**128**	**153**
200	229	159	175	183	193	203	173	137	176	176	129	133	172
201	139	148	174	173	189	197	167	121	153	162	126	131	158
203	121	150	176	171	188	194	160	113	147	176	125	131	156
202	99	145	169	167	184	179	153	106	135	176	123	129	152
194	97	111	143	162	177	173	150	101	129	153	121	129	145
181	101	105	133	160	175	179	150	101	159	142	120	126	144
182	123	122	133	157	173	176	147	100	200	129	119	127	148
183	138	134	148	161	173	173	150	101	247	136	119	127	155
179	146	132	148	158	171	170	147	103	235	133	119	127	153
175	171	139	149	160	170	164	143	107	206	125	119	127	153
168	201	139	151	161	166	155	140	108	188	122	119	127	152
168	204	136	149	158	163	152	137	107	182	118	119	124	150
169	**129**	**125**	**149**	**147**	**155**	**155**	**130**	**109**	**165**	**133**	**121**	**125**	**142**
173	145	118	149	153	157	148	130	107	194	113	120	126	142
173	140	120	149	148	154	155	130	107	194	116	119	125	142
177	92	120	149	146	155	161	130	107	182	118	119	124	139
177	92	118	145	143	155	161	130	108	171	122	120	124	139
177	97	117	139	140	157	161	127	109	176	120	120	125	139
173	99	117	141	140	157	161	130	110	206	129	121	125	141
168	104	119	143	144	157	158	130	110	212	138	121	125	142
164	108	115	144	146	155	155	130	110	153	147	121	126	139
164	130	122	145	147	155	148	130	110	135	144	121	125	140
163	157	133	154	149	155	145	130	110	129	144	122	125	143
159	187	143	161	151	155	145	130	109	124	147	122	126	145
158	193	157	166	154	154	148	133	109	124	151	123	126	147
164.3	**134.8**	**144.7**	**167.0**	**155.1**	**155.4**	**142.4**	**136.7**	**109.2**	**170.6**	**183.6**	**126.5**	**127.8**	**146.2**
162.0	161.4	154.3	168.8	153.9	155.4	148.5	133.3	109.2	123.5	150.9	124.2	126.3	144.4
166.7	133.9	150.7	169.7	153.9	155.4	148.5	133.3	108.1	123.5	158.2	125.8	126.7	142.3
168.1	111.6	150.4	167.9	152.8	155.4	145.5	133.3	108.1	129.4	185.5	127.2	126.7	141.9
169.5	99.7	149.6	164.3	152.8	155.4	148.5	133.3	108.1	147.1	192.7	127.5	127.2	143.1
170.0	101.7	136.0	160.6	151.7	155.4	145.5	133.3	108.1	158.8	203.6	127.5	127.4	143.4
166.2	102.6	130.6	163.4	151.7	155.4	145.5	133.3	108.1	188.2	201.8	126.9	127.8	144.3
163.4	107.5	128.2	163.8	152.8	157.1	142.4	136.7	108.1	247.1	190.9	126.5	127.6	147.2
162.0	120.3	135.3	164.3	153.9	155.4	136.4	136.7	108.1	217.7	174.6	126.2	128.1	146.4
164.3	140.9	143.6	167.4	157.3	155.4	136.4	140.0	109.2	200.0	174.6	126.2	128.1	149.3
163.4	158.3	146.7	174.2	158.4	155.4	139.4	143.3	110.3	170.6	192.7	126.9	128.7	149.8
158.2	192.2	153.8	170.6	160.7	155.4	139.4	146.7	111.5	152.9	187.3	126.9	129.4	151.1
156.8	188.1	157.4	170.6	160.7	155.4	136.4	146.7	111.5	152.9	189.1	126.9	129.0	150.3
165.7	**138.6**	**135.0**	**159.7**	**155.1**	**157.1**	**148.5**	**156.7**	**116.1**	**158.8**	**167.3**	**145.3**	**131.4**	**145.9**
162.0	158.3	160.1	169.2	159.6	155.4	136.4	146.7	112.6	164.7	185.5	128.2	130.5	149.1
164.8	144.3	157.2	168.3	157.3	155.4	139.4	146.7	112.6	164.7	187.3	130.2	130.2	147.3
168.5	100.9	151.4	166.1	156.2	155.4	139.4	146.7	111.5	164.7	189.1	136.9	130.3	143.7
169.5	93.0	130.8	161.1	155.1	155.4	139.4	146.7	112.6	164.7	180.0	140.3	130.5	141.3
171.8	95.1	120.4	156.6	152.8	155.4	139.4	146.7	113.8	170.6	167.3	141.6	130.7	141.0
168.5	104.6	126.9	155.7	151.7	155.4	139.4	146.7	113.8	194.1	150.9	141.9	130.3	142.4
165.7	114.2	129.2	155.7	151.7	155.4	145.5	150.0	114.9	194.1	152.7	142.3	130.1	143.3
163.4	129.3	126.1	155.7	153.9	157.1	154.5	156.7	117.2	152.9	149.1	145.6	130.3	144.2
165.7	150.4	126.6	156.6	156.2	157.1	154.5	160.0	118.4	152.9	156.4	148.7	130.5	146.8
164.8	173.0	125.1	157.5	156.2	157.1	160.6	166.7	119.5	141.2	160.0	154.7	132.0	148.7
162.0	197.4	127.7	157.0	155.1	158.9	163.6	170.0	120.7	129.4	160.0	164.4	135.1	150.1
161.5	202.3	137.1	157.9	155.1	158.9	169.7	173.3	121.8	135.3	160.0	169.5	135.7	151.5

Milk, butter and cheese prices drop in May and stay down until September usually; meat prices are slightly lower in the winter than at other seasons of the year. These slight variations combined in the total food budget mean that in a normal year the average cost of food is slightly lower in the spring and summer and slightly higher in the fall and winter than the average for the year. These various changes in food prices are shown in Chart 6.

Separate Cities

The increase in prices of all food items combined in 39 cities through 1914 and in an increasing number, up to 51 in 1920[1], is shown in Table 22. In Table 23 is shown the increase, first for 22 articles and, beginning with January 1, 1921, for 43 articles, in each of the 39 cities in which the series can be carried back to 1913.[2] Classification of these cities may be made in several ways to show the percentages of change in the local cost of food: (1) in relation to the country as a whole; (2) by geographical location; (3) by size of city.

The general shape of the curve of retail food prices is very much the same from city to city, as is shown in Chart 7, although some reached the peak in May, some in June and some in July, 1920. For the country as a whole the increase in May and June was 119% above the 1913 average. In Baltimore, Birmingham, Buffalo, Chicago, Cincinnati, Cleveland, Detroit, Fall River, Indianapolis, Kansas City, Manchester, Memphis, Milwaukee, Minneapolis, Omaha, Providence, Richmond, St. Louis, Scranton and Washington, food prices in July, 1920, were higher relatively than the combined average for the country as a whole. In the following cities the increase was over 125% at their respective peak periods: Detroit, with an increase of 139%; Birmingham, 126%; Chicago, 129%; Cleveland, 127%; Indianapolis, 128%; Kansas City, 131%; Manchester, 128%; Milwaukee, 133%; Minneapolis, 130%; Omaha, 138%; Richmond, 128%; St. Louis, 137%. On the other hand, food prices advanced only

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[1] Bulletin No. 334, *op. cit.*, p. 55.

[2] United States Bureau of Labor Statistics, "Retail Prices, 1913, to December, 1921," Bulletin No. 315, Washington, 1923, pp. 44–51; *Monthly Labor Review*, each month, March, 1922, to February, 1925, inclusive.

105% in Jacksonville; 95% in Los Angeles, 104% in Salt Lake City; and 102% in San Francisco.

In general, it appears that food prices advanced highest in the Middle West and least in the Far Western district. In the East and South, increases averaged more nearly that for the country as a whole. With price decreases this relationship has shifted somewhat although cities in the Far West still showed the smallest advances. In December, 1924, with an increase averaging 51.5% for the country as a whole, Chicago reported 60%; Detroit, 54%; and Washington, 59%; while Denver was 40%; Little Rock, 45%; Louisville, 47%; Memphis, 45%; Portland, 38%; Salt Lake City, 35%.

On the basis of population, it may be said that the changes in food prices were fairly well distributed. In New York, Philadelphia, Boston, Pittsburgh, Los Angeles and San Francisco, food price increases at the peak were less than the average for the country as a whole; in Chicago, Detroit, Cleveland, St. Louis, Baltimore and Buffalo, as already noted, the increases were often considerably more. In the next population group, those cities having 250,000 to 500,000 in 1920, Indianapolis, Kansas City, Milwaukee, Minneapolis and Washington reported increases greater than the average, while in Denver, Newark, New Orleans, Seattle and Portland, the increase was less. In the next largest group, with a population between 100,000 and 250,000, Birmingham, Fall River, Memphis, Omaha, Providence, Richmond and Scranton were above the average for the country, whereas Atlanta, Dallas, Louisville, New Haven and Salt Lake City were below. Only Manchester, among the smaller cities, reported an increase greater than the average for all. In December, 1924, Baltimore, Boston, Buffalo, Chicago, Detroit, New York, Pittsburgh and Philadelphia were above the average and St. Louis was the same as the average; Cleveland, Los Angeles, San Francisco were below. Milwaukee, New Orleans and Washington were higher; Cincinnati, Denver, Indianapolis, Kansas City, Minneapolis, Newark, Portland and Seattle were below. Birmingham, Dallas, Fall River, New Haven, Providence, Richmond and Scranton were higher and Atlanta, Louisville,

TABLE 23: INDEX NUMBERS OF RETAIL FOOD PRICES IN DECEMBER, 1924,

(Average for the

(United States Bureau

Year and Month	Atlanta, Ga.	Baltimore, Md.	Birmingham, Ala.	Boston, Mass.	Buffalo, N. Y.	Charleston, S. C.	Chicago, Ill.	Cincinnati, Ohio
1913: Av. for year	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
January	99	99	102	97	99	98	98	97
February	97	97	100	97	98	98	96	97
March	96	97	100	97	97	98	97	98
April	100	99	101	99	98	99	98	100
May	97	98	100	98	96	97	95	97
June	100	99	101	98	97	98	96	99
July	99	102	103	101	101	97	101	99
August	100	102	103	102	100	99	101	101
September	103	105	104	103	102	103	103	104
October	103	101	106	103	101	103	103	103
November	104	101	106	103	104	103	104	104
December	104	100	106	102	103	106	104	102
1914: Av. for year	**102**	**102**	**106**	**102**	**101**	**103**	**102**	**101**
January	102	101	108	101	102	103	103	103
February	98	101	105	100	99	101	100	101
March	98	99	105	97	97	102	98	98
April	97	97	103	96	95	99	97	97
May	99	97	104	97	96	99	98	98
June	101	100	104	98	97	101	99	102
July	104	103	109	102	101	104	104	104
August	107	106	111	106	105	106	108	103
September	107	107	111	107	107	106	107	105
October	103	104	109	104	103	104	104	103
November	102	105	105	107	105	104	105	104
December	103	104	104	105	103	103	103	100
1915: Av. for year	**99**	**101**	**104**	**101**	**101**	**100**	**103**	**99**
January	101	103	105	102	102	103	104	100
February	99	100	103	99	101	101	102	98
March	96	99	101	97	97	99	100	95
April	98	100	102	98	98	99	101	97
May	98	100	104	98	99	99	101	99
June	99	100	105	98	100	100	101	100
July	97	100	103	99	100	97	102	99
August	97	100	104	100	101	97	102	96
September	98	100	103	102	101	97	102	98
October	99	102	108	106	104	99	104	100
November	99	102	108	106	105	101	104	100
December	100	103	107	104	105	102	105	101
1916: Av. for year	**108**	**113**	**116**	**112**	**115**	**108**	**114**	**112**
January	101	104	109	104	106	103	107	105
February	101	103	108	103	104	101	104	104
March	101	105	109	104	106	104	106	106
April	103	107	111	105	109	106	109	108
May	105	110	112	107	108	105	108	109
June	107	112	115	110	112	107	112	112
July	106	107	114	109	112	106	111	109
August	107	112	117	113	117	107	115	112
September	112	119	120	116	121	111	121	117
October	115	121	123	119	124	113	121	117
November	120	124	127	123	131	118	126	123
December	121	125	130	124	130	119	127	125

Source: *Monthly Labor Review*, Washington, Monthly Issues from March, 1922, to

SPECIFIED CITIES IN THE UNITED STATES, BY MONTHS, 1913 TO INCLUSIVE

year 1913=100)
of Labor Statistics)

Cleveland, Ohio	Dallas, Tex.	Denver, Colo.	Detroit, Mich.	Fall River, Mass.	Indianapolis, Ind.	Jacksonville, Fla.	Kansas City, Mo.	Little Rock, Ark.	Los Angeles, Calif.	Louisville, Ky.
100	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
96	98	99	98	97	98	100	98	97	101	97
96	96	97	98	96	98	98	96	96	99	95
98	98	97	98	96	98	98	97	95	98	97
98	98	99	96	98	98	99	98	99	95	97
97	97	98	96	98	97	97	96	98	96	98
97	98	98	97	99	97	97	96	99	98	99
101	98	103	100	101	100	99	99	100	99	99
101	100	101	102	101	101	100	101	101	102	100
104	103	104	103	102	104	102	104	103	104	104
104	104	102	104	103	102	102	106	104	103	103
106	105	100	104	104	105	104	105	103	104	104
104	106	102	105	103	103	103	105	103	104	102
102	**103**	**101**	**103**	**102**	**102**	**101**	**102**	**102**	**101**	**100**
104	103	102	105	102	103	102	105	103	100	102
100	100	98	102	101	101	100	103	100	96	100
98	98	97	100	99	99	100	100	100	94	99
98	98	94	97	97	97	96	97	99	95	97
98	99	96	98	97	98	97	99	99	96	98
99	100	98	100	99	101	99	101	98	96	98
104	103	101	105	100	105	101	102	101	95	100
107	111	106	106	104	106	104	105	108	100	101
107	109	106	107	105	106	105	107	108	103	103
103	105	103	105	105	103	103	103	103	105	101
104	102	103	104	107	102	104	104	100	104	101
102	104	102	103	106	102	104	103	101	102	101
100	**102**	**103**	**101**	**101**	**100**	**100**	**103**	**101**	**95**	**98**
101	102	104	104	103	103	102	104	103	98	102
100	101	101	99	100	100	100	102	99	98	98
96	99	101	96	96	95	98	99	97	95	96
98	99	101	98	97	98	99	102	100	93	98
98	101	101	99	99	98	100	102	99	95	98
98	102	105	99	100	98	101	101	102	93	97
99	101	104	99	100	99	99	100	100	93	95
99	101	103	99	101	98	99	101	101	94	96
101	102	99	101	102	100	98	103	101	93	96
103	105	101	104	105	103	100	105	102	95	98
104	104	103	105	107	102	101	106	102	97	100
106	104	106	107	105	105	104	105	104	98	101
114	**111**	**112**	**114**	**112**	**114**	**108**	**114**	**110**	**102**	**110**
107	105	104	108	106	107	103	109	105	98	103
105	103	104	107	105	105	101	108	102	98	101
107	105	105	108	106	107	102	109	105	98	102
108	107	108	108	107	108	103	109	107	99	105
108	108	108	108	106	108	104	111	107	98	108
110	108	110	112	111	111	105	112	108	99	113
110	108	110	108	111	109	106	110	106	99	108
114	111	112	114	112	114	109	112	110	102	110
119	113	114	119	117	119	111	119	114	104	115
122	118	118	124	118	120	113	120	116	108	116
126	125	123	128	123	126	119	127	122	111	120
128	126	122	128	126	127	121	126	121	110	122

September, 1924, inclusive.

TABLE 23: INDEX NUMBERS OF RETAIL FOOD PRICES IN SPECIFIED
1924, INCLUSIVE

(Average for the

(United States Bureau

Year and Month	Atlanta, Ga.	Baltimore, Md.	Birmingham, Ala.	Boston, Mass.	Buffalo, N. Y.	Charleston, S. C.	Chicago, Ill.	Cincinnati, Ohio
1917: Av. for year	**143**	**152**	**152**	**142**	**154**	**145**	**148**	**149**
January	121	129	131	124	133	122	132	133
February	125	135	136	131	141	126	138	137
March	126	135	137	127	140	128	134	137
April	141	146	152	140	152	143	150	152
May	146	153	158	144	161	147	152	154
June	149	157	156	146	163	149	157	153
July	142	151	151	142	152	144	150	147
August	145	155	156	145	157	147	149	148
September	149	162	160	151	159	151	153	154
October	156	164	163	152	164	160	155	156
November	157	164	161	152	165	161	152	153
December	158	167	165	153	166	160	153	158
1918: Av. for year	**169**	**184**	**173**	**164**	**177**	**176**	**166**	**167**
January	161	174	166	155	171	168	159	161
February	156	173	162	155	171	169	159	163
March	156	164	157	147	163	163	150	155
April	157	165	160	148	161	163	151	154
May	160	169	161	152	166	169	156	158
June	165	178	166	160	170	168	162	159
July	168	182	171	167	178	171	167	165
August	174	187	174	170	181	176	170	166
September	179	197	182	174	186	182	177	177
October	182	202	187	178	190	191	176	179
November	183	203	189	178	191	192	180	180
December	188	203	194	183	194	195	183	182
1919: Av. for year	**187**	**197**	**195**	**181**	**192**	**196**	**186**	**185**
January	188	203	194	179	196	199	183	183
February	174	187	177	166	176	183	168	170
March	176	187	184	171	181	185	173	176
April	180	193	190	175	185	191	179	184
May	184	198	195	181	191	195	182	186
June	186	198	195	176	189	198	180	186
July	189	202	199	183	197	198	192	191
August	194	204	201	188	201	201	197	188
September	189	201	194	185	197	196	192	183
October	188	198	197	186	193	195	190	185
November	194	199	204	190	195	201	194	191
December	202	199	209	189	201	205	198	194
1920: Av. for year	**202**	**207**	**209**	**203**	**210**	**207**	**207**	**203**
January	201	205	206	195	208	207	202	202
February	199	204	203	196	206	206	201	196
March	200	201	202	195	204	208	206	199
April	206	212	214	206	216	212	219	214
May	217	217	222	206	215	216	220	220
June	212	219	226	214	223	213	227	219
July	215	223	224	218	225	214	229	220
August	207	213	213	209	213	213	210	207
September	203	209	211	209	210	207	207	206
October	197	203	206	204	205	204	198	197
November	191	200	198	201	202	198	194	194
December	178	182	185	182	184	189	175	174

CITIES IN THE UNITED STATES, BY MONTHS, 1913 TO DECEMBER, —(*Continued*)

year 1913 = 100)
of Labor Statistics)

Cleveland, Ohio	Dallas, Tex.	Denver, Colo.	Detroit, Mich.	Fall River, Mass.	Indianapolis, Ind.	Jacksonville, Fla.	Kansas City, Mo.	Little Rock, Ark.	Los Angeles, Calif.	Louisville, Ky.
150	**145**	**144**	**152**	**142**	**149**	**138**	**150**	**144**	**125**	**150**
135	132	121	134	125	132	120	130	123	110	129
143	133	124	141	128	136	125	136	126	114	133
139	137	128	139	131	135	125	137	130	115	135
150	148	142	148	140	152	135	155	146	125	151
159	149	151	152	147	158	137	158	148	130	157
157	146	153	164	149	161	139	160	143	125	157
145	144	150	152	141	151	138	150	144	122	147
151	148	151	156	141	150	140	151	147	129	150
155	150	152	161	150	154	144	152	154	131	154
156	155	151	160	151	156	150	156	157	137	162
153	153	151	157	151	153	153	155	154	131	160
155	153	152	161	153	153	153	160	155	134	162
167	**165**	**167**	**173**	**166**	**163**	**163**	**168**	**166**	**149**	**171**
159	159	154	167	155	163	158	159	156	140	169
161	156	155	169	156	157	157	161	158	138	165
150	155	150	159	151	149	152	154	154	140	160
151	153	155	156	151	150	151	154	154	137	159
155	157	164	161	158	150	153	157	160	140	161
162	157	166	167	164	159	155	163	164	141	163
168	162	172	177	168	163	157	166	166	147	167
172	165	170	179	171	166	162	170	172	152	168
179	171	176	187	176	175	168	177	176	157	182
176	176	177	184	179	172	175	181	179	162	185
179	178	178	185	181	176	178	182	178	164	185
184	183	183	188	185	181	183	187	181	165	188
187	**184**	**184**	**194**	**183**	**184**	**180**	**187**	**182**	**164**	**188**
185	187	187	190	181	182	185	187	181	165	189
169	174	170	171	172	166	168	161	171	157	174
174	177	177	177	173	171	169	176	174	158	178
181	180	185	187	176	178	175	183	178	161	185
184	182	186	192	181	182	178	187	180	165	190
184	184	183	192	179	178	181	184	182	164	191
196	189	190	204	187	193	181	190	185	163	194
194	189	188	208	189	194	186	192	188	161	195
190	183	181	198	187	187	181	186	181	163	193
191	182	183	197	186	184	181	190	184	164	189
194	190	187	201	190	190	184	194	189	170	189
198	192	192	206	190	196	188	199	193	175	191
208	**197**	**195**	**215**	**204**	**202**	**192**	**206**	**195**	**184**	**197**
205	201	190	211	200	198	195	198	197	178	197
201	195	190	210	200	196	190	199	192	179	192
204	197	195	211	201	197	189	205	192	180	190
220	203	205	227	202	213	194	218	204	186	206
219	210	208	228	211	219	205	223	209	193	216
224	210	215	239	215	228	198	231	207	195	218
227	209	212	238	220	222	201	221	207	195	210
210	198	197	217	209	204	196	205	200	187	198
208	194	193	214	207	201	191	203	194	186	195
202	190	186	205	202	192	187	198	188	180	189
196	185	182	201	199	186	183	192	183	177	183
176	172	164	181	180	169	172	176	172	166	164

TABLE 23: INDEX NUMBERS OF RETAIL FOOD PRICES IN SPECIFIED
1924, INCLUSIVE

(Average for the
(United States Bureau

Year and Month	Atlanta, Ga.	Baltimore, Md.	Birmingham, Ala.	Boston, Mass.	Buffalo, N. Y.	Charleston, S. C.	Chicago, Ill.	Cincinnati, Ohio
1921: Av. for year	**151**	**156**	**158**	**157**	**156**	**150**	**155**	**154**
January	171	179	182	174	178	185	171	170
February	158	164	169	160	159	169	156	157
March	156	161	167	157	157	165	158	157
April	149	156	159	154	154	141	155	154
May	144	148	150	148	142	155	146	146
June	143	146	149	147	140	151	148	150
July	144	149	151	154	150	153	153	151
August	150	157	155	163	160	158	161	156
September	149	154	155	159	155	155	155	155
October	150	154	154	158	158	153	153	154
November	146	154	153	160	158	152	152	149
December	147	152	151	157	156	152	152	145
1922: Av. for year	**141**	**146**	**144**	**145**	**147**	**146**	**145**	**140**
January	142	146	144	145	149	149	145	140
February	142	147	143	145	150	148	143	140
March	139	143	142	140	144	145	142	138
April	140	142	143	141	144	147	142	140
May	141	144	144	139	141	146	143	141
June	141	145	143	139	143	147	145	144
July	142	145	143	147	146	147	148	143
August	141	143	142	143	144	145	143	138
September	139	144	141	144	146	141	144	138
October	139	146	143	149	151	142	144	139
November	143	150	145	154	154	144	146	142
December	144	151	149	151	154	146	149	141
1923: Av. for year	**143**	**152**	**149**	**151**	**151**	**148**	**152**	**143**
January	141	150	146	149	151	148	149	141
February	140	148	146	147	149	145	147	138
March	139	148	144	148	146	145	146	139
April	141	148	147	147	147	147	148	141
May	141	149	148	147	147	147	148	141
June	142	152	149	146	146	148	149	143
July	143	152	150	153	151	147	157	145
August	145	152	148	155	152	149	154	142
September	147	157	151	155	156	149	157	147
October	147	157	151	155	154	149	155	148
November	146	157	153	159	158	149	157	149
December	148	156	154	156	157	152	156	147
1924: Av. for year	**144**	**152**	**150**	**149**	**149**	**149**	**155**	**143**
January	147	153	152	152	152	152	156	149
February	145	153	150	150	152	151	155	146
March	140	149	147	146	147	149	152	143
April	140	146	146	142	142	146	150	141
May	140	148	145	143	143	144	150	143
June	142	149	144	144	144	144	152	142
July	141	148	146	148	146	146	155	138
August	143	150	148	149	145	147	154	137
September	144	153	151	151	150	149	156	141
October	149	156	154	153	152	153	157	144
November	149	157	157	154	155	153	158	145
December	149	158	160	155	157	155	160	145

CITIES IN THE UNITED STATES, BY MONTHS, 1913 TO DECEMBER,
—(*Continued*)
year 1913 = 100)
of Labor Statistics)

Cleveland, Ohio	Dallas, Tex.	Denver, Colo.	Detroit, Mich.	Fall River, Mass.	Indianapolis, Ind.	Jacksonville, Fla.	Kansas City, Mo.	Little Rock, Ark.	Los Angeles, Calif.	Louisville, Ky.
150	**151**	**141**	**155**	**155**	**147**	**148**	**153**	**146**	**143**	**141**
172	171	160	175	171	165	166	171	166	159	159
155	156	145	157	159	152	154	156	150	148	144
151	154	144	158	156	150	152	157	149	143	146
148	150	142	151	151	145	146	153	147	139	140
141	145	133	146	145	138	139	146	140	136	133
140	145	134	145	143	136	137	143	142	137	133
147	145	141	155	148	144	143	148	142	134	137
154	148	141	161	156	152	149	155	144	140	143
151	148	140	157	156	150	148	152	143	142	141
148	149	141	154	155	147	146	152	142	147	140
147	148	141	152	160	144	147	151	142	145	140
144	148	139	152	160	140	146	149	141	141	139
137	**141**	**129**	**145**	**144**	**135**	**137**	**137**	**135**	**135**	**131**
135	142	126	145	147	136	138	143	135	134	131
135	141	127	145	147	137	138	136	133	135	131
133	137	126	141	143	133	135	135	132	130	130
134	138	126	142	140	133	135	137	133	131	130
134	140	128	142	139	134	135	136	136	131	131
138	141	131	148	140	138	136	138	136	133	131
137	143	133	146	143	138	137	137	135	133	129
133	142	127	144	140	132	135	133	135	132	128
135	139	126	144	141	133	134	134	134	137	130
139	142	129	145	143	134	137	137	136	142	133
142	143	133	147	149	137	139	138	137	142	135
145	146	139	149	152	136	140	141	138	142	138
146	**143**	**135**	**152**	**150**	**142**	**139**	**140**	**139**	**140**	**136**
143	142	133	149	150	139	138	139	139	139	135
141	142	131	146	147	137	136	139	137	134	132
140	140	130	147	147	137	136	139	137	133	132
142	141	133	148	145	139	136	141	139	137	133
143	141	133	149	145	140	136	140	139	137	134
146	141	135	151	144	141	137	140	139	139	134
148	141	139	157	150	146	139	139	140	138	134
147	141	135	156	149	145	139	138	138	138	134
151	144	136	159	153	147	140	143	141	143	140
149	145	137	156	154	144	143	141	141	147	139
150	146	140	153	157	144	144	143	141	147	141
147	149	139	152	157	143	145	143	141	145	140
145	**146**	**134**	**151**	**145**	**141**	**141**	**142**	138	**141**	**138**
146	149	139	153	152	144	144	145	141	143	141
146	145	134	152	148	142	144	143	139	141	137
142	143	131	148	144	138	139	140	135	140	135
140	141	129	146	137	136	136	139	135	140	133
139	141	129	147	138	137	134	138	132	137	132
141	142	132	150	141	138	135	139	133	138	134
142	145	134	151	140	142	138	138	133	140	134
145	146	132	150	143	140	139	139	137	141	136
148	148	132	152	147	143	141	141	139	145	139
149	148	134	153	149	144	144	144	140	146	142
149	150	136	154	151	144	145	145	141	144	145
150	154	140	154	154	146	145	147	145	142	147

TABLE 23: INDEX NUMBERS OF RETAIL FOOD PRICES IN SPECIFIED 1924, INCLUSIVE

(Average for the

(United States Bureau

Year and Month	Manchester, N. H.	Memphis, Tenn.	Milwaukee, Wis.	Minneapolis, Minn.	Newark, N. J.	New Haven, Conn.	New Orleans, La.	New York, N. Y.	Omaha, Nebr.
1913: Av. for year	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
January	97	97	97	98	100	98	99	99	100
February	97	97	97	97	98	96	98	98	95
March	97	97	99	97	97	96	97	98	97
April	97	100	98	97	98	97	99	99	98
May	97	98	96	97	101	97	97	97	97
June	98	98	96	96	103	99	98	99	98
July	100	100	100	101	99	101	100	100	98
August	101	101	100	100	101	102	102	99	99
September	101	103	103	105	103	102	103	102	103
October	104	102	104	105	103	104	101	102	104
November	106	103	106	104	107	105	103	104	108
December	103	103	104	103	104	102	102	103	105
1914: Av. for year	**102**	**102**	**103**	**103**	**102**	**102**	**102**	**101**	**104**
January	101	104	104	103	102	101	102	103	106
February	100	101	101	100	100	100	99	100	102
March	99	101	98	98	97	99	99	99	100
April	97	99	97	98	95	96	97	95	99
May	98	99	98	97	96	97	98	97	99
June	99	99	101	99	100	98	99	98	101
July	103	102	105	101	101	103	101	99	101
August	107	107	107	109	106	107	106	105	107
September	107	106	109	108	107	106	108	106	109
October	106	103	106	107	105	106	106	104	107
November	107	102	105	105	107	107	104	104	107
December	106	101	104	105	105	105	104	104	107
1915: Av. for year	**102**	**100**	**101**	**101**	**102**	**101**	**102**	**101**	**102**
January	102	103	106	106	104	102	105	102	105
February	101	100	102	102	101	99	102	100	102
March	99	98	99	97	98	97	101	97	98
April	99	99	101	99	99	97	101	99	102
May	100	100	101	101	98	98	101	99	103
June	100	100	100	100	101	100	100	99	103
July	101	97	100	101	100	101	102	100	102
August	102	97	99	99	100	102	101	100	101
September	103	98	100	99	101	105	100	100	101
October	105	102	101	101	104	107	104	103	103
November	107	103	102	103	105	107	102	104	104
December	104	102	103	104	106	104	103	106	104
1916: Av. for year	**113**	**111**	**115**	**114**	**111**	**115**	**112**	**112**	**115**
January	106	105	107	105	106	108	105	106	106
February	106	104	106	106	104	107	105	104	108
March	107	105	109	107	105	108	107	106	108
April	108	108	110	109	105	108	109	106	111
May	108	108	108	110	105	111	109	107	111
June	111	109	112	111	110	113	109	111	114
July	110	107	113	111	107	112	108	108	110
August	113	110	117	115	110	115	111	111	112
September	117	114	121	119	115	121	117	115	119
October	120	116	122	120	117	123	119	119	123
November	123	122	128	124	123	129	125	123	128
December	124	122	130	125	122	127	125	123	127

Cities in the United States, by Months, 1913 to December, —(*Continued*)

year 1913 = 100)

of Labor Statistics)

Philadelphia, Pa.	Pittsburgh, Pa.	Portland, Oreg.	Providence, R. I.	Richmond, Va.	St. Louis, Mo.	Salt Lake City, Utah	San Francisco, Calif.	Scranton, Pa.	Seattle, Wash.	Washington, D. C.
100	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
99	98	100	99	98	99	101	99	97	100	98
97	97	99	97	97	97	99	97	96	98	96
97	98	98	97	97	97	98	97	95	96	97
98	98	96	99	99	96	98	94	97	96	99
97	96	96	97	97	94	97	95	97	96	97
98	97	96	98	98	96	98	98	98	97	98
99	98	99	99	98	98	100	98	100	99	99
100	100	101	100	99	101	102	101	101	102	101
103	103	104	103	102	105	101	104	103	101	103
103	103	105	104	103	104	102	105	105	104	104
105	105	103	105	104	105	102	106	105	105	105
104	105	103	103	103	106	102	104	105	107	102
102	**103**	**100**	**103**	**103**	**104**	**102**	**101**	**101**	**100**	**102**
103	104	101	102	102	106	104	102	104	103	103
100	102	99	101	101	104	100	98	100	101	100
99	100	95	100	99	99	98	96	98	96	98
96	97	93	97	98	98	98	96	96	95	96
98	98	94	98	98	98	96	98	95	94	97
99	101	96	99	101	99	101	99	97	96	100
101	102	97	102	102	105	102	99	110	97	102
105	106	102	107	107	110	107	103	103	102	108
107	106	104	107	108	108	108	106	105	104	107
105	104	102	107	106	105	107	106	104	105	105
105	105	102	109	104	107	104	106	105	105	105
105	104	101	107	105	106	102	104	104	104	104
101	**100**	**98**	**101**	**103**	**101**	**103**	**101**	**100**	**99**	**101**
105	104	99	103	103	106	103	102	101	101	105
101	101	99	101	104	104	103	102	99	100	101
97	96	98	96	101	98	100	100	95	99	98
98	98	97	97	101	101	101	100	96	98	99
98	98	97	99	102	102	102	101	98	98	100
101	99	98	98	103	100	104	101	98	99	101
99	98	98	101	101	99	104	100	97	98	100
100	99	96	101	102	99	103	101	98	97	100
101	100	97	102	102	100	101	101	100	97	101
102	102	97	106	104	102	102	102	102	100	103
104	103	99	106	104	102	105	103	106	100	103
106	104	97	106	107	105	103	102	106	102	104
113	**112**	**104**	**114**	**114**	**114**	**111**	**105**	**112**	**105**	**112**
106	105	101	105	106	106	103	101	105	102	105
105	104	101	105	105	106	104	102	103	102	104
107	107	101	106	107	108	104	101	105	102	106
109	107	103	107	108	109	106	103	107	103	107
109	107	103	107	112	110	108	103	108	102	107
112	110	102	112	115	111	109	102	110	101	112
109	109	102	112	112	108	111	103	108	103	109
111	111	101	115	114	113	112	104	110	103	111
117	116	103	120	119	120	114	106	115	104	115
120	118	107	122	121	121	117	110	119	111	118
125	123	112	128	124	126	123	116	127	115	121
126	126	110	127	127	127	123	114	126	113	120

TABLE 23: INDEX NUMBERS OF RETAIL FOOD PRICES IN SPECIFIED
1924, INCLUSIVE

(Average for the

(United States Bureau

Year and Month	Manchester, N. H.	Memphis, Tenn.	Milwaukee, Wis.	Minneapolis, Minn.	Newark, N. J.	New Haven, Conn.	New Orleans, La.	New York, N. Y.	Omaha, Nebr.
1917: Av. for year	**145**	**147**	**154**	**148**	**143**	**146**	**148**	**146**	**150**
January	125	123	136	130	128	128	127	129	125
February	130	128	141	137	132	134	131	135	129
March	130	132	142	137	129	134	135	133	131
April	142	148	156	149	139	143	145	144	153
May	148	153	161	154	147	150	152	150	156
June	150	153	163	159	146	152	153	150	161
July	145	146	157	153	140	145	147	143	152
August	148	150	157	150	143	149	152	146	151
September	154	153	158	152	150	154	154	153	156
October	158	159	159	155	156	159	160	159	156
November	155	157	154	148	152	156	160	155	154
December	156	159	158	153	156	155	161	159	156
1918: Av. for year	**170**	**171**	**169**	**164**	**167**	**171**	**168**	**167**	**169**
January	160	166	162	156	162	159	163	165	160
February	161	162	164	158	159	162	162	162	158
March	154	158	154	150	150	153	157	154	151
April	155	159	153	151	153	155	155	155	153
May	160	162	157	155	156	159	157	157	160
June	168	165	161	160	164	170	159	164	165
July	173	169	170	166	166	174	164	167	172
August	175	172	172	166	168	176	168	170	172
September	179	182	180	171	176	180	177	178	179
October	185	185	180	176	179	184	186	182	182
November	187	186	181	175	186	188	188	186	182
December	187	192	189	180	187	187	188	191	186
1919: Av. for year	**185**	**194**	**191**	**188**	**180**	**183**	**188**	**186**	**191**
January	186	191	190	179	184	186	191	188	187
February	170	177	172	168	171	172	174	175	170
March	173	182	179	177	172	172	177	177	178
April	179	190	186	187	175	177	184	180	187
May	184	193	190	190	177	181	188	184	191
June	180	195	186	186	176	179	189	183	188
July	190	200	199	196	182	186	192	188	199
August	194	202	203	195	184	190	194	188	197
September	188	195	198	191	181	188	191	186	192
October	188	195	196	192	183	185	191	187	195
November	192	202	197	195	185	188	190	195	198
December	193	205	203	205	188	191	195	199	208
1920: Av. for year	**206**	**204**	**209**	**208**	**195**	**201**	**200**	**204**	**210**
January	198	201	207	208	193	195	204	204	207
February	200	202	207	207	192	197	198	203	204
March	198	203	207	208	189	198	197	199	207
April	203	214	218	221	202	202	206	209	222
May	212	219	222	225	200	209	209	211	227
June	222	221	229	230	204	211	207	214	238
July	228	224	233	230	211	218	211	217	229
August	216	208	214	204	198	208	204	204	210
September	212	205	207	204	197	206	199	203	209
October	205	197	196	193	192	200	196	200	197
November	200	188	192	188	190	194	192	197	193
December	182	171	177	173	174	179	178	181	173

Cities in the United States, by Months, 1913 to December, —(*Continued*)

year 1913 = 100)

of Labor Statistics)

Philadelphia, Pa.	Pittsburgh, Pa.	Portland, Oreg.	Providence, R. I.	Richmond, Va.	St. Louis, Mo.	Salt Lake City, Utah	San Francisco, Calif.	Scranton, Pa.	Seattle, Wash.	Washington, D. C.
146	**148**	**132**	**148**	**151**	**153**	**141**	**130**	**146**	**135**	**149**
130	131	113	127	128	132	124	116	127	116	126
137	138	116	133	134	140	130	121	132	122	134
134	135	119	133	133	138	130	120	133	123	129
143	147	129	146	147	158	145	128	144	132	146
149	152	137	150	158	157	147	132	153	139	154
145	153	135	151	157	161	146	127	155	140	156
143	146	135	146	147	152	143	125	145	138	147
147	149	137	151	151	156	146	132	147	138	149
154	155	139	157	160	160	148	137	151	141	158
156	157	140	160	165	163	145	140	156	143	161
156	155	142	159	165	159	145	140	156	144	163
159	158	141	158	168	162	145	141	157	143	167
171	**170**	**157**	**173**	**181**	**173**	**156**	**156**	**170**	**162**	**179**
164	165	143	164	172	167	146	147	162	147	172
164	167	146	162	174	166	148	145	162	149	169
154	157	144	157	165	157	144	145	154	148	162
155	156	144	158	167	157	144	141	153	146	162
161	159	154	162	171	160	151	148	159	156	169
168	167	151	168	177	168	151	150	164	156	174
173	169	158	174	180	171	159	154	171	163	178
173	171	164	178	183	177	158	157	175	170	181
182	180	167	181	192	184	162	165	178	173	188
183	181	171	187	195	187	167	171	182	177	196
187	184	171	189	197	188	167	173	183	178	197
189	187	172	190	202	191	172	174	190	180	198
186	**186**	**173**	**189**	**199**	**192**	**171**	**171**	**187**	**179**	**196**
189	191	174	188	203	191	171	172	190	180	197
173	173	162	176	185	177	159	165	175	171	183
176	176	168	177	185	183	167	165	175	172	185
183	181	170	182	191	190	168	166	181	173	192
186	184	170	187	199	193	168	169	186	176	194
184	183	169	183	202	188	172	169	186	176	195
187	190	174	192	203	197	175	169	193	178	200
191	190	174	195	205	197	174	167	195	181	203
190	186	176	193	203	193	175	171	191	182	199
191	190	176	194	203	194	172	172	188	183	200
192	194	179	198	206	199	175	177	192	185	201
196	197	183	200	206	204	178	182	199	188	203
201	**202**	**187**	**209**	**214**	**213**	**185**	**189**	**208**	**190**	**208**
200	203	184	206	213	211	180	186	207	190	208
198	198	184	206	213	209	180	187	205	192	207
196	198	187	204	208	211	183	187	202	190	202
208	212	193	207	214	229	189	193	210	198	213
211	209	199	215	226	230	202	201	214	202	215
211	215	209	218	228	237	204	202	222	209	216
217	218	197	224	224	229	198	198	225	204	220
203	205	189	215	219	214	187	189	215	191	209
201	204	187	212	214	210	183	191	209	189	209
196	196	178	208	212	201	179	183	205	179	203
192	195	173	204	206	196	175	182	202	173	201
176	180	163	188	188	176	159	172	185	160	186

TABLE 23: INDEX NUMBERS OF RETAIL FOOD PRICES IN SPECIFIED
1924, INCLUSIVE

(Average for the

(United States Bureau

Year and Month	Manchester, N. H.	Memphis, Tenn.	Milwaukee, Wis.	Minneapolis, Minn.	Newark, N. J.	New Haven, Conn.	New Orleans, La.	New York, N. Y.	Omaha, Nebr.
1921: Av. for year	**156**	**146**	**153**	**149**	**149**	**152**	**152**	**157**	**151**
January	170	165	170	169	168	173	176	176	170
February	157	149	155	153	153	158	161	160	156
March	156	151	156	154	152	155	158	156	156
April	153	144	153	150	148	150	154	156	153
May	148	137	141	141	139	143	144	147	144
June	146	140	141	139	139	140	141	148	144
July	155	143	152	149	142	146	144	150	143
August	161	145	160	150	150	153	152	159	146
September	158	145	156	148	150	153	151	157	149
October	157	146	152	147	150	151	151	159	151
November	157	144	149	146	150	153	147	159	149
December	157	142	149	146	150	153	146	159	147
1922: Av. for year	**142**	**134**	**142**	**140**	**140**	**141**	**142**	**147**	**139**
January	146	133	140	136	140	142	144	148	139
February	143	136	142	140	140	142	143	147	140
March	138	134	139	138	136	137	142	142	138
April	139	134	139	139	136	137	142	143	139
May	138	135	141	141	133	135	142	142	139
June	138	135	143	144	137	137	140	146	142
July	143	136	147	141	138	141	142	145	141
August	139	133	139	135	137	139	140	143	136
September	140	133	140	138	139	141	139	145	137
October	143	134	141	139	143	144	142	149	138
November	147	133	144	142	147	147	141	154	139
December	144	136	147	145	148	146	144	156	141
1923: Av. for year	**149**	**138**	**148**	**144**	**146**	**148**	**143**	**153**	**142**
January	145	136	144	143	146	147	145	153	139
February	144	135	142	142	140	144	143	149	137
March	145	135	143	142	141	143	141	149	139
April	145	137	144	143	142	143	142	150	141
May	145	136	145	144	141	143	141	149	141
June	146	137	145	143	145	145	140	151	140
July	153	138	153	144	145	149	141	153	142
August	152	138	149	143	146	148	141	152	142
September	152	141	152	146	149	153	145	155	146
October	152	140	150	145	150	154	146	157	144
November	155	141	152	144	152	155	144	160	144
December	153	142	152	146	151	154	147	159	145
1924: Av. for year	**145**	**137**	**149**	**143**	**143**	**146**	**144**	**150**	**143**
January	149	142	152	146	148	150	148	154	147
February	147	140	153	146	147	148	146	153	145
March	144	137	148	143	142	145	143	147	142
April	141	135	145	139	139	141	140	146	140
May	139	133	145	139	139	141	139	147	139
June	141	132	146	141	140	142	137	147	141
July	142	133	148	144	139	143	139	146	141
August	144	134	149	141	139	143	143	146	140
September	148	137	151	141	142	147	145	150	141
October	147	140	149	143	145	149	147	152	143
November	149	141	151	144	147	151	149	156	145
December	149	145	153	147	149	152	152	157	147

Cities in the United States, by Months, 1913 to December, —(*Continued*)

year 1913 = 100)

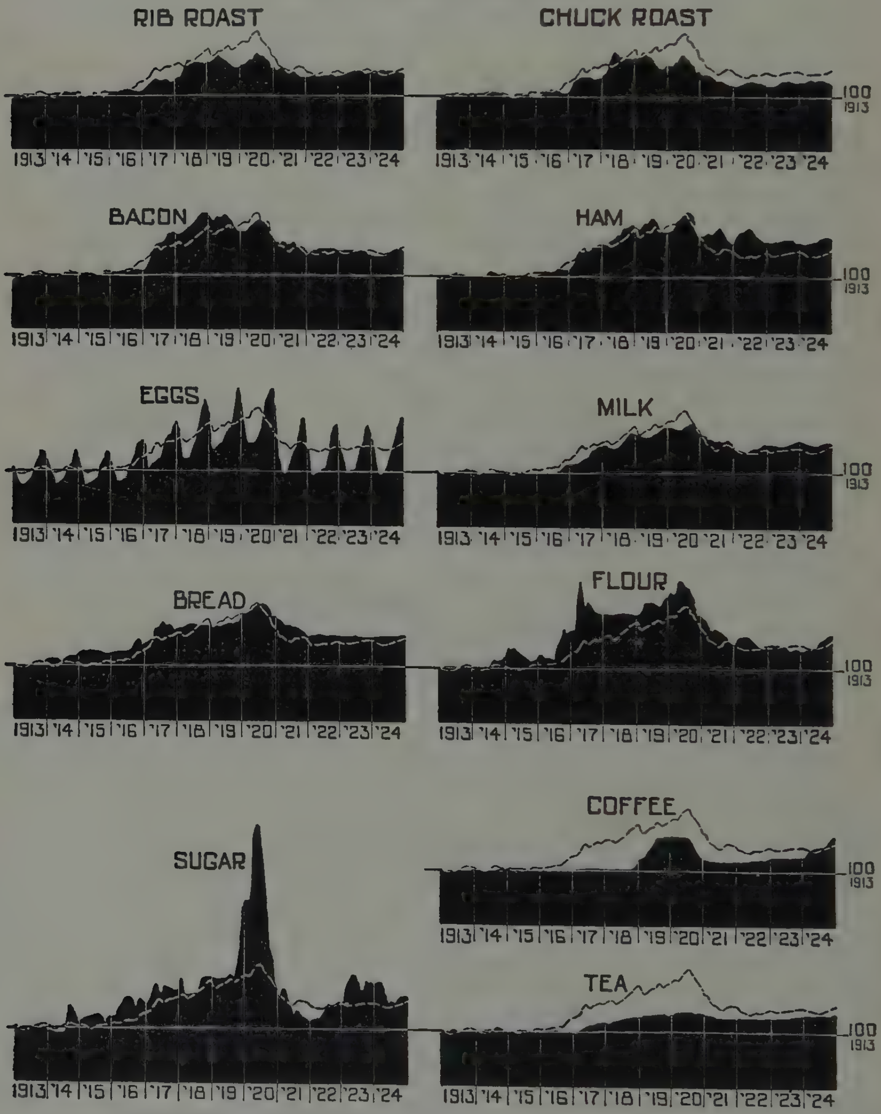
of Labor Statistics)

Philadelphia, Pa.	Pittsburgh, Pa.	Portland, Oreg.	Providence, R. I.	Richmond, Va.	St. Louis, Mo.	Salt Lake City, Utah	San Francisco, Calif.	Scranton, Pa.	Seattle, Wash.	Washington, D. C.
152	**153**	**138**	**161**	**164**	**153**	**136**	**147**	**162**	**140**	**162**
171	174	154	179	182	173	153	163	180	153	180
156	158	144	165	170	157	143	153	166	146	164
155	156	142	162	165	156	141	148	162	144	163
152	154	136	156	160	152	135	144	160	139	161
145	144	127	151	155	146	129	139	151	132	153
144	146	128	149	155	149	129	139	149	132	153
144	148	133	157	156	150	134	140	154	138	157
153	154	135	164	163	154	135	144	162	139	166
151	153	137	163	161	155	134	147	162	140	165
151	152	141	162	165	153	135	151	161	142	163
151	153	138	164	165	148	136	150	163	139	159
150	149	134	161	163	143	133	147	164	136	157
143	**139**	**131**	**146**	**153**	**141**	**122**	**139**	**148**	**136**	**150**
144	140	126	148	156	138	121	137	156	129	150
144	138	128	146	156	140	123	137	152	134	151
141	135	126	143	151	139	120	135	147	132	146
141	136	127	142	150	138	120	135	145	133	147
142	135	128	141	153	138	120	134	146	134	149
144	139	128	141	155	142	122	137	147	135	150
141	139	134	146	153	144	124	136	147	137	149
137	135	134	144	151	139	121	135	142	137	147
139	139	131	146	149	140	121	140	143	137	148
144	141	134	151	152	142	124	148	147	140	153
149	146	135	154	156	143	125	144	151	139	154
150	149	136	154	157	147	127	145	154	139	155
150	**149**	**133**	**153**	**156**	**145**	**126**	**142**	**152**	**138**	**154**
148	146	132	152	154	143	124	140	152	136	151
145	144	130	150	153	142	121	137	149	134	150
145	145	128	150	152	141	122	135	149	133	148
144	144	129	148	153	144	122	137	148	135	149
149	145	129	148	153	144	122	138	149	136	151
149	149	131	148	155	143	125	140	149	136	155
152	150	132	154	156	144	127	140	152	137	158
151	149	132	154	156	142	127	143	152	138	156
153	151	136	157	159	148	128	147	156	142	158
154	154	140	157	158	149	131	151	156	146	159
154	156	140	160	159	151	132	151	158	145	159
152	154	136	157	160	150	129	149	158	141	157
147	**148**	**134**	**149**	**153**	**147**	**127**	**144**	**149**	**139**	**153**
150	154	136	153	154	150	128	146	154	140	154
149	151	132	152	155	148	125	143	151	139	154
144	145	130	147	152	145	122	141	147	138	149
142	143	130	143	148	143	122	140	143	137	146
144	144	129	143	148	142	122	138	143	136	147
146	146	130	144	149	144	125	141	144	138	149
143	146	133	146	149	144	126	141	145	139	150
143	145	134	149	151	144	125	142	146	140	151
146	147	136	152	155	146	127	146	149	140	155
148	149	138	153	157	149	132	149	152	140	157
151	152	138	155	159	151	134	149	153	140	160
153	154	138	155	162	152	135	148	155	141	159

Chart 6: Index Numbers of the Retail Prices of the Principal Articles of Food in the United States, by Months, 1913 to December, 1924

Average for year 1913 = 100

(United States Bureau of Labor Statistics)

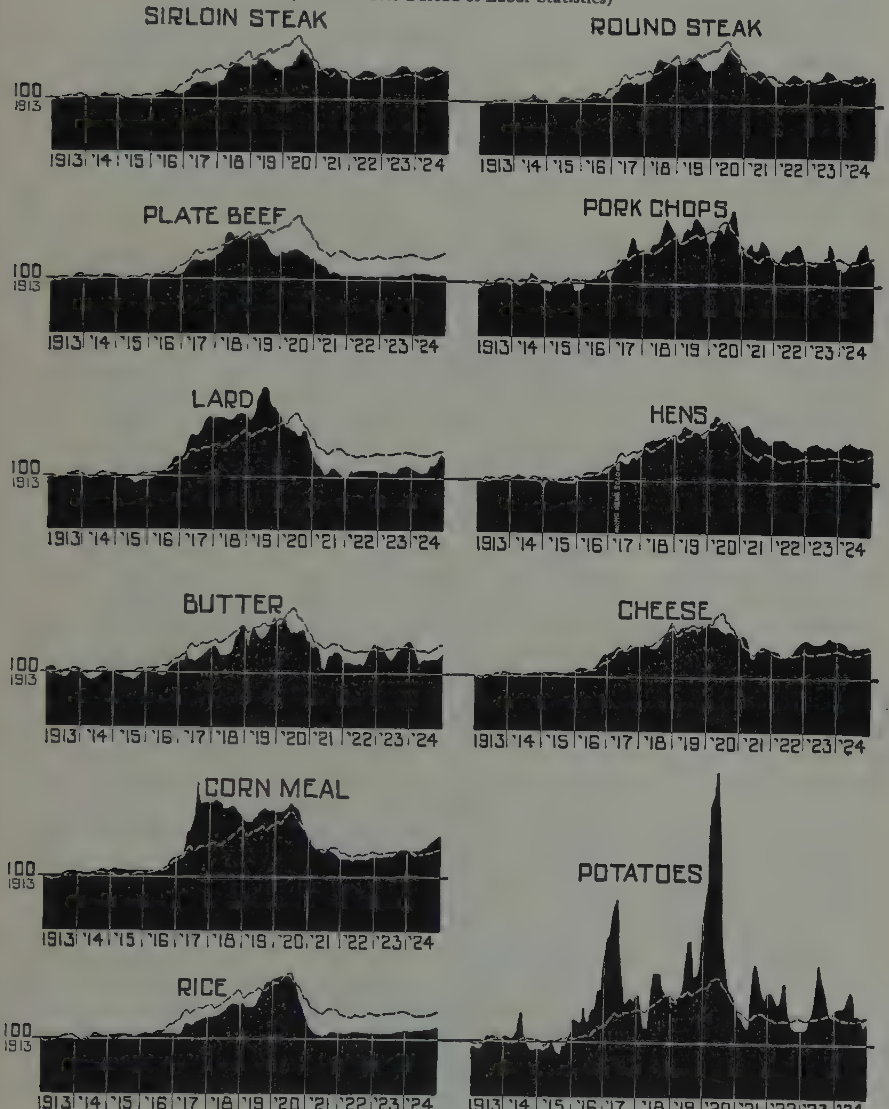


FINE DOTTED LINE REPRESENTS PRICE OF ALL FOOD ARTICLES COMBINED

Chart 6: Index Numbers of the Retail Prices of the Principal Articles of Food in the United States, by Months, 1913 to December, 1924

Average for year 1913 = 100

(United States Bureau of Labor Statistics)



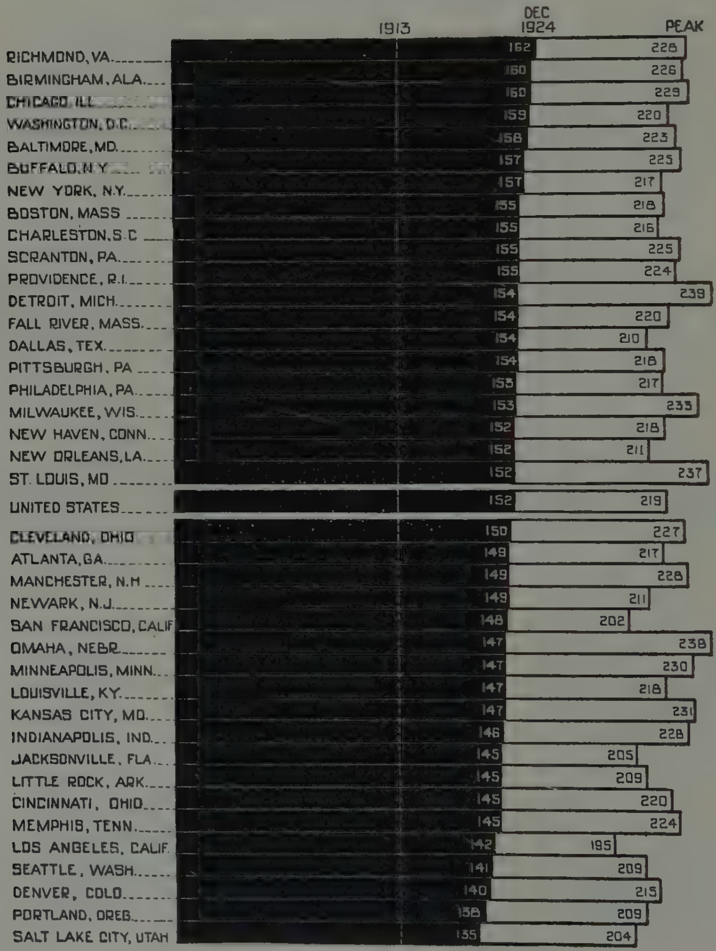
FINE DOTTED LINE REPRESENTS PRICE OF ALL FOOD ARTICLES COMBINED

Memphis, Omaha, Salt Lake City were lower. Among the smaller cities only Charleston was above the average and Jacksonville, Little Rock, and Manchester were lower than for the country as a whole in December, 1924.

CHART 7: INDEX NUMBERS OF RETAIL FOOD PRICES IN THE UNITED STATES AND IN SPECIFIED CITIES AT THE PEAK AND IN DECEMBER, 1924

Average Prices in 1913 = 100

(United States Bureau of Labor Statistics)



Among all of the 39 cities for which there were reports the range of increase at the peak was from 139% increase in Detroit down to 95% in Los Angeles; in December, 1924, the smallest advance since the pre-war average was recorded in Salt Lake City, 35%; the largest, 62%, in Richmond. As noted above, however, both of these limits were extreme; in the majority of cities the increases in the cost of food on any given date fall within a few points above or below the average for the country as a whole. Such differences as occur in normal times seem to depend on geographical location more than on any other single factor, but this, of course, reflects industrial conditions to a considerable extent. In unusual times, such as the war period, the latter influence tends to be particularly apparent.

Purchasing Value of the Dollar

As prices of the different goods and services making up a balanced cost of living have changed from one month to another in the decade from July, 1914 to November, 1924, the quantity of goods available for a fixed amount of money has likewise changed. In other words, as prices have gone up, the purchasing value of the dollar has gone down. In July, 1920, the dollar of 1914 would secure only 48.9% of what it would originally buy. The relative value of the dollar in terms of 1914 purchasing power, on different dates for which the Conference Board has comparable cost of living data on a comprehensive scale, is shown in Table 24.

Table 24: Purchasing Value of a Dollar Based on Increases in the Cost of Living on Specified Dates Since November, 1914

(National Industrial Conference Board)

Date	Value of Dollar	Date	Value of Dollar	Date	Value of Dollar
July, 1914	$1.00	November, 1919	$.549	July, 1922	$.643
July, 1915	.995	March, 1920	.513	November, 1922	.631
July, 1916	.920	July, 1920	.489	March, 1923	.628
July, 1917	.762	November, 1920	.518	July, 1923	.618
June, 1918	.657	March, 1921	.593	November, 1923	.604
November, 1918	.606	July, 1921	.613	March, 1924	.614
March, 1919	.623	November, 1921	.613	July, 1924	.618
July, 1919	.581	March, 1922	.646	November, 1924	.605

RELATIVE IMPORTANCE OF MAJOR ITEMS IN THE FAMILY BUDGET

As pointed out in Chapter I, as prices of the various goods and services making up the average family budget increase or decrease in cost, unless these changes are in the same ratio at the same time, a shifting of the proportion of the total expenditures required for them necessarily takes place. In other words, if food prices increase and other prices remain constant, more will be required for food if the same standard is to be maintained; if other prices increase but not so much as food prices, the same will be true. If food prices decline more than prices of the other items, less will be required for food and more for the other items. When each item changes in cost from one month to another in a ratio differing from every other item, as many combinations of budget distributions may result as there are price changes.

TABLE 25: RELATIVE IMPORTANCE OF MAJOR ITEMS IN THE FAMILY BUDGETS OF AMERICAN WAGE EARNERS, ON SPECIFIED DATES, BASED ON CHANGES IN THE COST OF EACH ITEM, JULY, 1914 TO NOVEMBER, 1924, INCLUSIVE

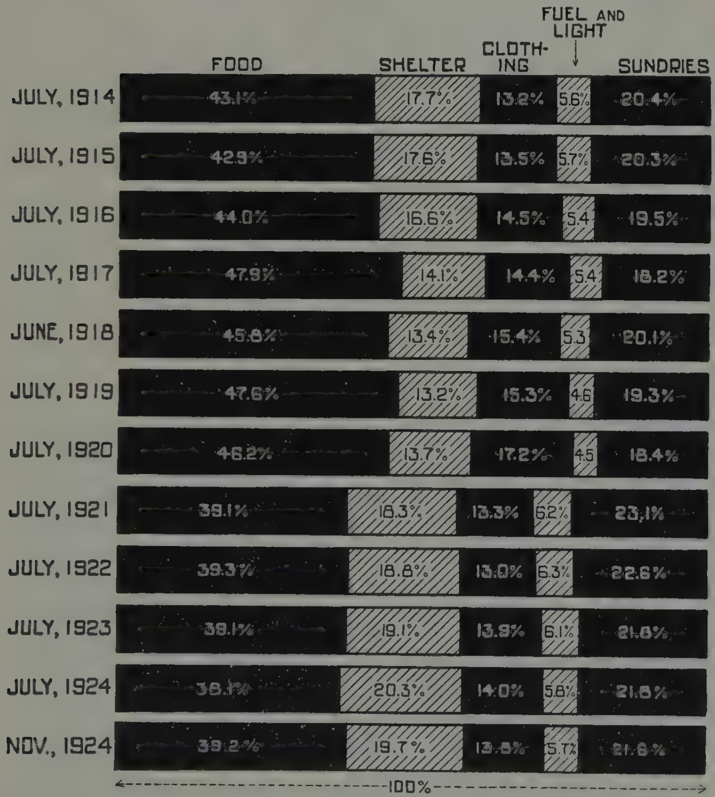
(National Industrial Conference Board)

Date	Food	Shelter	Clothing	Fuel and Light	Sundries
July, 1914	43.1	17.7	13.2	5.6	20.4
July, 1915	42.9	17.6	13.5	5.7	20.3
July, 1916	44.0	16.6	14.5	5.4	19.5
July, 1917	47.9	14.1	14.4	5.4	18.2
June, 1918	45.8	13.4	15.4	5.3	20.1
November, 1918	47.8	12.8	15.4	4.8	19.2
March, 1919	47.0	13.4	14.9	5.0	19.7
July, 1919	47.6	13.2	15.3	4.6	19.3
November, 1919	45.4	13.4	17.0	4.6	19.6
March, 1920	44.3	13.5	18.8	4.3	19.1
July, 1920	46.2	13.7	17.2	4.5	18.4
November, 1920	43.1	15.2	15.6	5.8	20.3
March, 1921	39.8	18.0	13.6	6.2	22.4
July, 1921	39.1	18.3	13.3	6.2	23.1
November, 1921	40.2	18.3	13.1	6.1	22.3
March, 1922	38.7	18.9	13.1	6.3	23.0
July, 1922	39.3	18.8	13.0	6.3	22.6
November, 1922	39.4	18.7	13.3	6.6	22.0
March, 1923	38.5	18.9	13.9	6.5	22.2
July, 1923	39.1	19.1	13.9	6.1	21.8
November, 1923	39.4	19.3	13.9	5.9	21.5
March, 1924	38.1	20.1	14.1	5.9	21.8
July, 1924	38.1	20.3	14.0	5.8	21.8
November, 1924	39.2	19.7	13.8	5.7	21.6

To show how this shifting of expenditures has occurred with each increase in the cost of living recorded by the National Industrial Conference Board through its comprehensive surveys, Table 25 and Chart 8 have been constructed. These are based on the figures in Table 3 and should be compared with them. The data show just what proportion of the total family expenditures were required on specified dates for each of the major items in the cost of living, if the same standard of living were to prevail as in July, 1914.

CHART 8: RELATIVE IMPORTANCE OF MAJOR ITEMS IN THE FAMILY BUDGETS OF AMERICAN WAGE EARNERS, ON SPECIFIED DATES, BASED ON CHANGES IN THE COST OF EACH ITEM, JULY, 1914 TO NOVEMBER, 1924, INCLUSIVE

(National Industrial Conference Board)



To obtain this redistribution for any date, the index number for each item on that date in relation to July, 1914, is multiplied by its 1914 weight and the product is divided by the index number for the total cost of living.[1]

Table 25 may well complete the present survey of cost of living data in the United States since it indicates the status of the American wage earner's family budget in November, 1924, after ten years of constantly shifting prices. It shows that compared with 43.1% of his expenditures necessarily laid out for food in July, 1914, in November, 1924, only 39.2% was required. This saving on food was distributed among the other major items as follows: For fuel and light, one-tenth of a point more; for clothing, six-tenths of a point more; for sundries, 1.2 points more; for rents, 2.0 points more. Rents in November, 1924, were relatively the highest and food prices, relatively the lowest, of any of the major items in the family budget, based on increased costs since July, 1914.

[1] This, of course, is not cumulative. If the new distribution of the budget were used each year to weight up the increases for the separate items as price changes occurred, a very different set of figures would result.

APPENDIX

APPENDIX A—1: CHANGES IN THE COST OF LIVING IN EACH OF

(United States Bureau

Item of Expenditure	Dec., 1915	Dec., 1916	Dec., 1917	Dec., 1918	June, 1919	Dec., 1919	June, 1920	Dec., 1920	May, 1921	Sept., 1921
	Per Cent of Increase									
										Balti-
Food	4.1[a]	20.9	64.4	96.4	91.1	92.5	110.9	75.6	48.4	48.6
Clothing	2.7	24.0	52.1	107.7	128.9	177.4	191.3	159.5	123.2	101.5
Housing	0.2[a]	.9	3.0	13.8	16.8	25.8	41.6	49.5	63.0	64.0
Fuel and light	0.5	9.1	25.5	46.0	37.1	48.1	57.6	79.0	70.9	84.9
House-furnishing goods	5.6	26.4	60.8	122.3	134.6	167.0	191.8	181.9	147.5	128.7
Miscellaneous	1.4[a]	18.5	51.3	78.7	82.8	99.4	111.4	112.9	111.8	112.2
All items	1.4[a]	18.5	51.3	84.7	84.0	98.4	114.3	96.8	77.4	76.5
										Boston,
Food	0.3[a]	18.0	45.8	74.9	67.9	80.8	105.0	74.4	41.9	52.1
Clothing	6.6	21.9	47.5	117.5	137.9	192.4	211.1	192.7	150.3	118.8
Housing	0.1[a]	0.1	0.1[a]	2.8	5.1	12.2	16.2	25.8	29.8	31.6
Fuel and light	1.1	10.5	29.2	56.6	55.0	63.2	83.6	106.0	97.8	94.4
House-furnishing goods	8.4	26.3	58.4	137.6	153.7	198.7	233.7	226.4	171.2	139.5
Miscellaneous	1.6	15.7	38.1	62.0	64.8	81.1	91.8	96.6	96.2	94.6
All items	1.6	15.7	38.1	70.6	72.8	92.3	110.7	97.4	74.4	72.8
										Buffalo,
Food	2.4	30.1	64.1	87.8	82.9	94.7	115.7	78.5	37.7	49.9
Clothing	8.9	29.6	58.5	123.1	140.7	190.8	210.6	168.7	131.6	102.4
Housing	1.2	4.7	9.4	20.7	28.0	29.0	46.6	48.5	61.1	61.7
Fuel and light	1.3	9.3	23.5	49.3	51.9	55.7	69.8	74.9	73.9	79.5
House-furnishing goods	7.1	24.1	50.2	106.3	118.1	165.4	199.7	189.2	151.3	130.9
Miscellaneous	3.5	24.4	51.1	76.0	78.7	90.3	101.9	107.4	107.8	105.7
All items	3.5	24.4	51.1	80.9	84.2	102.7	121.5	101.7	80.3	78.4
										Chicago,
Food	2.7	25.2	53.4	78.7	73.3	93.1	120.0	70.5	41.9	51.3
Clothing	7.5	24.2	50.6	138.9	157.1	224.0	205.3	158.6	122.7	86.0
Housing	0.1[a]	0.7	1.4	2.6	8.0	14.0	35.1	48.9	78.2	79.8
Fuel and light	0.9[a]	6.6	19.3	37.1	35.7	40.1	62.4	83.5	65.3	67.1
House-furnishing goods	5.9	20.0	47.5	108.9	126.9	176.0	215.9	205.8	162.4	138.0
Miscellaneous	3.0	19.5	41.8	58.7	61.7	84.3	87.5	96.5	98.5	97.5
All items	3.0	19.5	41.8	72.2	74.5	100.6	114.6	93.3	78.4	75.3
										Cleveland,
Food	1.4	26.4	54.3	79.4	79.7	92.9	118.7	71.7	37.4	47.7
Clothing	2.0	18.0	43.7	102.6	125.2	171.2	185.1	156.0	124.0	90.8
Housing	0.1	0.9	11.3	16.5	21.8	39.9	47.3	80.0	88.1	82.8
Fuel and light	0.3	10.0	26.8	51.9	47.9	62.9	90.3	94.5	89.6	91.9
House-furnishing goods	4.7	19.7	47.8	102.4	117.0	165.5	186.5	176.8	133.6	110.0
Miscellaneous	1.4	19.1	42.9	67.1	74.7	85.9	117.9	134.0	129.6	123.4
All items	1.4	19.1	42.9	71.4	77.2	98.2	120.3	107.3	87.5	82.4

[a] Decrease.

Nineteen Cities, December, 1914 to December, 1924, Inclusive

of Labor Statistics)

more, Md.

from December, 1914, to—

Dec., 1921	Mar., 1922	June, 1922	Sept., 1922	Dec., 1922	Mar., 1923	June, 1923	Sept., 1923	Dec., 1923	Mar., 1924	June, 1924	Sept., 1924	Dec., 1924
46.9	38.3	39.9	39.4	46.1	42.6	46.5	52.0	50.6	43.9	44.0	48.1	53.0
88.6	82.0	78.9	77.8	80.5	81.6	81.4	82.9	81.8	81.6	78.3	76.2	76.2
64.7	65.2	65.4	65.6	66.9	67.6	69.6	70.4	71.9	71.7	72.4	72.4	72.2
85.5	85.5	84.8	90.9	94.9	95.5	91.6	88.2	93.5	93.5	84.8	88.9	88.7
123.7	115.0	113.3	114.2	116.6	125.0	127.5	129.5	130.2	132.7	129.4	124.8	125.7
108.6	106.9	104.4	103.8	102.6	103.2	103.8	104.0	105.2	105.6	109.9	106.1	107.1
73.2	67.9	67.6	67.2	70.9	70.2	72.0	74.7	74.8	71.9	71.9	72.5	74.8

Mass.

50.4	34.3	32.5	37.4	44.9	41.2	39.7	47.9	48.8	39.3	37.9	44.7	47.8
106.3	98.9	96.7	92.4	92.0	92.6	93.0	93.4	92.6	92.0	91.2	88.7	89.1
33.8	33.9	34.4	34.9	36.7	37.2	40.2	44.3	47.0	49.1	50.7	51.3	52.4
98.5	93.9	92.5	91.7	99.9	97.7	88.8	92.8	97.0	91.1	90.7	94.5	93.7
136.9	128.1	124.2	124.0	133.6	142.5	150.5	148.7	148.2	147.0	136.9	135.5	138.1
93.0	91.6	89.5	89.3	87.8	88.4	89.2	89.2	93.0	90.3	88.0	87.6	85.9
70.2	61.2	59.6	60.9	65.1	63.9	63.5	67.9	69.4	64.6	63.2	66.0	67.3

N. Y.

50.8	39.4	38.5	41.2	48.8	41.5	41.6	50.9	51.9	42.3	39.5	45.4	51.6
96.5	87.7	83.6	79.4	81.4	83.0	83.4	84.9	83.8	83.2	81.7	80.8	79.9
61.7	61.9	64.7	64.7	64.9	64.9	70.0	70.9	71.8	72.0	76.3	76.3	76.8
79.7	78.8	78.8	122.1	115.7	119.5	119.1	116.7	120.4	122.2	116.6	117.9	117.9
124.7	115.5	108.0	107.8	112.8	121.3	127.9	127.0	127.5	125.7	121.0	120.8	121.0
103.0	99.5	97.9	97.9	97.5	98.7	100.5	102.7	102.5	102.5	101.9	101.1	100.9
76.8	69.9	68.6	71.0	73.9	72.5	74.1	78.2	78.6	75.1	73.9	75.7	77.8

Ill.

48.3	38.3	41.6	40.7	44.8	42.4	45.1	52.5	52.5	48.3	47.9	52.1	56.2
74.3	66.8	63.0	65.8	67.5	71.2	72.2	76.0	76.0	74.9	72.6	70.9	67.8
83.9	84.1	87.4	87.6	88.9	89.1	92.1	92.4	95.4	95.8	104.4	104.2	105.8
69.4	54.8	55.4	64.3	65.6	62.4	54.9	57.3	59.3	57.7	53.0	53.9	56.1
133.7	144.5	108.5	107.5	120.4	127.2	133.1	133.9	132.9	131.7	122.2	121.5	121.9
94.5	92.7	87.9	87.3	86.7	87.3	87.7	88.1	88.1	88.1	90.7	90.7	90.7
72.3	65.1	65.0	65.6	68.0	68.0	69.6	73.2	73.7	72.0	72.6	73.7	75.3

Ohio

40.9	29.8	34.6	32.3	41.1	37.1	42.1	47.0	43.6	38.2	37.2	44.6	46.2
85.8	77.4	72.4	69.5	70.9	77.1	77.6	79.6	79.6	79.1	78.4	75.2	72.9
81.2	72.0	69.6	70.1	74.0	73.8	73.8	74.7	78.7	79.1	77.7	77.9	78.6
103.8	102.2	102.2	113.5	116.3	118.0	151.6	150.8	147.0	145.3	142.6	143.1	144.1
100.8	88.4	87.8	92.3	104.8	118.7	129.6	130.5	129.3	122.7	118.0	112.8	113.4
123.2	111.1	110.7	109.4	109.4	109.4	108.1	110.8	113.1	112.7	112.7	112.5	112.1
78.8	68.5	68.9	68.1	72.9	73.3	77.1	79.9	79.6	77.3	75.9	77.9	78.1

APPENDIX A—1: CHANGES IN THE COST OF LIVING IN EACH OF —(*Con*

(United States Bureau

Item of Expenditure										
										Detroit,
										Per Cent of Increase
	Dec., 1915	Dec., 1916	Dec., 1917	Dec., 1918	June, 1919	Dec., 1919	June, 1920	Dec., 1920	May, 1921	Sept., 1921
Food	4.1	26.5	59.7	82.5	86.4	99.5	132.0	75.6	41.1	54.3
Clothing	2.3	18.9	46.7	113.8	125.2	181.8	208.8	176.1	134.1	99.9
Housing	2.1	17.5	32.6	39.0	45.2	60.2	68.8	108.1	101.4	96.6
Fuel and light	1.6	9.9	30.2	47.6	47.6	57.9	74.9	104.5	83.6	81.9
House-furnishing goods	8.7	24.5	50.4	107.3	129.3	172.6	206.7	184.0	134.0	102.9
Miscellaneous	3.5	22.3	49.9	72.6	80.3	100.1	141.3	144.0	140.1	131.9
All items	3.5	22.3	49.9	78.0	84.4	107.9	136.0	118.6	93.3	88.0
										Houston,
Food	1.0[a]	19.9	57.3	86.1	85.7	97.5	107.5	83.2	45.6	49.7
Clothing	2.7	25.0	51.3	117.3	134.8	192.0	211.3	187.0	143.4	111.5
Housing	2.3[a]	7.3[a]	7.7[a]	1.7[a]	1.9	13.4	25.3	35.1	39.4	39.4
Fuel and light	0.9[a]	8.3	22.7	47.5	37.6	60.0	55.1	74.2	46.0	39.0
House-furnishing goods	6.1	39.6	62.3	119.9	144.5	181.8	213.9	208.2	173.7	156.7
Miscellaneous	0.3[a]	16.4	44.9	67.6	72.3	88.2	90.4	103.9	100.8	100.0
All items	0.3[a]	16.4	44.9	75.7	80.2	101.7	112.2	104.0	79.7	75.0
										Jackson
Food	0.3[a]	17.6	50.8	76.2	74.2	80.9	90.1	65.6	32.6	43.1
Clothing	10.5	33.7	71.9	130.5	139.8	217.2	234.0	209.3	167.5	131.1
Housing	6.9[a]	18.2[a]	18.7[a]	5.9	9.7	22.0	28.9	34.1	36.5	37.7
Fuel and light	[b]	2.3	15.1	55.2	49.2	61.1	72.6	92.6	80.7	68.1
House-furnishing goods	15.1	43.4	73.7	126.5	140.0	186.2	224.2	222.3	182.7	140.9
Miscellaneous	1.3	14.7	41.6	60.5	65.9	80.9	102.8	105.6	107.5	100.9
All items	1.3	14.7	41.6	71.5	77.5	101.5	116.5	106.2	85.8	78.7
										Los Ange
Food	4.1[a]	0.4	33.4	61.8	60.7	71.0	90.8	62.7	33.2	39.3
Clothing	2.8	14.3	45.0	109.1	123.2	167.6	184.5	166.6	127.4	98.3
Housing	2.7[a]	2.5[a]	1.6[a]	4.4	8.7	26.8	42.6	71.4	85.3	86.0
Fuel and light	0.4	2.3	10.4	18.3	18.6	35.3	53.5	53.5	52.7	52.7
House-furnishing goods	6.3	23.1	56.4	118.5	134.2	175.5	202.2	202.2	156.6	148.4
Miscellaneous	1.9[a]	7.7	28.9	52.0	59.1	76.9	86.6	100.6	96.8	98.8
All items	1.9[a]	7.7	28.9	58.0	65.1	85.3	101.7	96.7	78.7	76.8
										Mobile,
Food	1.0[a]	19.9	57.3	80.6	83.6	98.4	110.5	73.5	39.1	43.7
Clothing	2.0	9.0	38.8	86.0	94.0	123.7	137.4	122.2	90.6	68.1
Housing	1.9[a]	4.3[a]	3.6[a]	11.2	11.9	29.6	34.6	53.6	53.3	53.1
Fuel and light	[b]	8.8	27.1	57.1	66.6	75.6	86.3	122.3	102.1	97.2
House-furnishing goods	4.1	15.3	42.8	108.3	113.9	163.3	177.9	175.4	140.7	124.3
Miscellaneous	0.4[a]	13.8	43.2	72.4	75.3	87.0	100.3	100.7	96.9	96.1
All items	0.4[a]	13.8	43.2	71.4	76.6	94.5	107.0	93.3	70.8	67.2

[a] Decrease

[b] No change.

NINETEEN CITIES, DECEMBER, 1914 TO DECEMBER, 1924, INCLUSIVE
tinued)

of Labor Statistics)

Mich.

from December, 1914, to—

Dec., 1921	Mar., 1922	June, 1922	Sept., 1922	Dec., 1922	Mar., 1923	June, 1923	Sept., 1923	Dec., 1923	Mar., 1924	June, 1924	Sept., 1924	Dec., 1924
47.3	36.5	43.1	39.8	44.8	42.6	46.7	54.2	47.5	43.4	45.5	47.8	49.7
92.5	82.7	81.4	81.2	79.9	83.1	84.0	84.2	85.3	84.7	82.3	78.1	76.1
91.1	88.0	86.9	87.6	92.1	92.3	96.9	99.1	107.5	107.3	105.6	104.2	103.8
77.5	74.0	75.2	90.3	95.5	93.3	87.3	86.0	84.9	81.4	76.5	82.3	82.7
96.8	82.6	76.0	80.0	81.1	100.5	105.7	104.9	105.3	106.7	103.4	98.1	98.1
130.7	126.3	121.3	122.2	121.5	123.5	124.2	128.2	128.4	127.7	127.2	123.8	125.4
82.4	74.6	75.3	75.6	79.4	79.4	81.7	85.5	84.7	83.0	82.4	81.7	82.2

Tex.

50.1	40.2	38.9	38.5	45.0	39.1	41.2	43.5	46.4	40.8	37.3	46.1	54.4
104.9	98.8	98.4	97.8	98.2	100.4	100.4	102.6	102.6	102.0	100.8	96.2	95.6
39.8	39.5	38.5	38.1	37.3	37.0	36.7	36.7	36.4	35.7	34.9	34.8	34.7
39.4	34.4	32.9	35.7	39.2	33.6	36.5	40.2	55.8	56.4	45.0	45.0	44.3
148.2	137.5	133.7	131.8	140.4	146.7	150.2	149.2	148.2	148.2	143.7	142.0	143.0
99.0	96.0	94.0	93.0	93.0	92.8	91.5	91.9	93.2	90.1	89.5	89.1	88.0
73.6	67.2	65.9	65.4	68.4	66.5	67.2	68.7	70.6	67.7	65.0	67.6	70.5

ville, Fla.

40.6	30.0	30.6	28.9	34.8	31.0	32.0	35.1	39.9	33.5	30.2	35.6	40.0
117.9	104.8	99.9	99.1	99.3	101.3	101.1	104.9	104.5	103.7	102.7	98.4	94.6
38.3	37.6	35.3	34.2	35.1	35.2	34.3	33.0	33.4	33.4	33.3	33.0	33.5
68.9	61.6	58.9	58.9	65.7	65.9	63.6	62.1	75.1	75.1	72.1	71.4	72.9
134.9	122.0	115.3	117.7	127.1	134.6	137.9	139.6	139.4	140.6	132.9	133.6	132.4
99.3	98.7	95.5	95.5	94.7	95.3	95.3	97.8	96.6	97.0	95.0	99.3	99.1
75.1	68.0	65.7	65.0	67.8	67.4	67.7	69.9	71.9	69.7	67.3	69.5	70.4

les, Calif.

38.4	27.5	30.6	34.0	39.4	29.9	36.2	40.5	42.1	37.5	35.2	41.6	38.8
94.3	84.4	81.3	78.2	78.0	83.2	82.5	83.6	83.0	83.2	81.4	80.9	80.4
90.1	96.0	95.6	94.4	94.8	97.1	97.7	99.3	100.9	103.7	99.4	96.8	93.3
52.7	48.4	39.1	35.9	35.6	34.5	33.7	33.8	34.1	34.0	33.6	34.3	34.4
143.2	133.7	128.8	128.1	138.1	148.6	153.6	152.3	152.0	147.0	136.1	134.4	137.7
99.6	104.0	103.8	102.2	101.2	101.4	100.8	101.0	104.2	105.0	105.4	104.8	104.2
76.4	72.4	72.5	72.4	74.5	72.9	75.1	77.1	78.8	77.4	75.1	77.0	75.4

Ala.

42.7	32.3	33.2	32.9	39.1	36.2	37.7	41.3	44.7	38.2	33.4	41.9	49.7
57.7	50.3	49.7	51.0	50.8	51.3	51.8	55.4	55.4	55.2	54.3	53.4	53.4
49.9	48.4	47.7	47.3	43.8	43.1	42.5	42.5	42.6	42.3	41.4	41.0	40.9
98.2	86.1	84.4	90.9	96.4	95.6	93.3	91.0	98.1	98.1	91.4	91.0	90.2
116.9	98.2	97.8	93.1	97.9	108.6	114.0	114.2	114.8	114.4	109.3	107.2	107.2
94.3	89.6	87.5	87.3	91.0	90.4	89.8	89.8	91.3	88.8	93.7	94.3	94.3
63.6	55.8	55.3	55.5	58.8	58.0	58.6	60.5	62.6	59.5	58.0	60.9	63.9

APPENDIX A—1: Changes in the Cost of Living in Each of —(Con

(United States Bureau

Item of Expenditure	*New York,*									
	Per Cent of Increase									
	Dec., 1915	Dec., 1916	Dec., 1917	Dec., 1918	June, 1919	Dec., 1919	June, 1920	Dec., 1920	May, 1921	Sept., 1921
Food	1.3	16.3	55.3	82.6	75.3	91.0	105.3	73.5	42.5	50.3
Clothing	4.8	22.3	54.2	131.3	151.6	219.7	241.4	201.8	159.5	131.5
Housing	0.1[a]	0.1[a]	2.6	6.5	13.4	23.4	32.4	38.1	42.2	44.0
Fuel and light	0.1[a]	11.0	19.9	45.5	45.4	50.6	60.1	87.5	95.9	92.4
House-furnishing goods	8.4	27.6	56.5	126.5	136.6	172.9	205.1	185.9	156.5	136.7
Miscellaneous	2.0	14.9	44.7	70.0	75.1	95.8	111.9	116.3	117.6	117.8
All items	2.0	14.9	44.7	77.3	79.2	103.8	119.2	101.4	81.7	79.7
Norfolk,										
Food	0.8	22.4	63.9	86.2	89.8	91.5	107.6	76.3	45.4	50.2
Clothing	0.8	6.0	31.6	94.6	104.8	158.4	176.5	153.6	121.6	93.9
Housing	0.1	1.7[a]	1.7[a]	39.0	46.5	63.3	70.8	90.8	94.6	94.6
Fuel and light	[b]	17.0	33.3	74.6	69.7	89.9	110.6	128.9	97.3	98.1
House-furnishing goods	0.6	8.7	39.0	105.5	110.7	143.6	165.0	160.5	129.0	110.5
Miscellaneous	0.6	14.7	45.2	76.8	83.7	97.5	108.4	106.3	106.3	112.5
All items	0.6	14.7	45.2	80.7	87.1	107.0	122.2	109.0	88.1	83.9
Philadel										
Food	0.3	18.9	54.4	80.7	75.5	87.2	101.7	68.1	37.8	44.6
Clothing	3.6	16.0	51.3	111.2	135.9	190.3	219.6	183.5	144.7	112.2
Housing	0.3[a]	0.7[a]	2.6	8.0	11.3	16.7	28.6	38.0	44.2	47.1
Fuel and light	0.8[a]	5.4	21.5	47.9	43.3	51.3	66.8	96.0	85.6	89.3
House-furnishing goods	6.9	19.9	49.8	107.7	117.8	162.8	187.4	183.4	135.5	109.1
Miscellaneous	1.2	14.7	43.8	67.5	71.2	88.6	102.8	122.3	119.2	116.4
All items	1.2	14.7	43.8	73.9	76.2	96.5	113.5	100.7	79.8	76.0
Portland,										
Food	2.0[a]	18.6	49.8	86.8	80.6	91.9	114.5	78.7	46.7	56.8
Clothing	2.1	9.7	32.8	85.8	103.8	148.5	165.9	147.8	116.3	96.6
Housing	0.2	0.6	2.4	2.5	5.7	10.7	14.5	20.0	23.1	23.3
Fuel and light	0.4	11.4	28.9	67.7	58.4	69.8	83.9	113.5	96.8	90.9
House-furnishing goods	6.2	20.9	43.5	110.8	126.4	163.7	190.3	191.2	152.2	139.1
Miscellaneous	0.4[a]	13.8	38.0	65.6	72.1	83.2	89.4	94.3	94.1	94.1
All items	0.4[a]	13.8	38.0	72.2	74.3	91.6	107.6	93.1	72.1	72.0
Portland,										
Food	3.8[a]	9.8	42.2	70.6	67.1	81.6	107.1	60.9	26.0	35.9
Clothing	3.0	15.8	44.4	96.6	115.5	142.1	158.6	122.1	91.2	70.4
Housing	10.9[a]	19.6[a]	22.2[a]	12.3	20.2	27.7	33.2	36.9	42.9	43.3
Fuel and light	1.0[a]	3.4	20.2	30.9	31.3	42.3	46.9	65.9	67.1	58.9
House-furnishing goods	2.9	18.0	54.5	109.0	122.1	145.1	183.9	179.9	148.0	126.9
Miscellaneous	3.1[a]	6.1	31.2	57.9	62.3	71.6	79.7	81.1	81.1	80.9
All items	3.1[a]	6.1	31.2	64.2	69.2	83.7	100.4	80.3	62.2	60.5

[a] Decrease.

[b] No change.

NINETEEN CITIES, DECEMBER, 1914 TO DECEMBER, 1924, INCLUSIVE

tinued)

of Labor Statistics)

N. Y.

from December, 1914, to—

Dec., 1921	Mar., 1922	June, 1922	Sept., 1922	Dec., 1922	Mar., 1923	June, 1923	Sept., 1923	Dec., 1923	Mar., 1924	June, 1924	Sept., 1924	Dec., 1924
51.8	36.5	40.0	38.8	49.5	43.0	44.4	48.2	52.0	41.2	41.1	43.2	50.0
117.8	107.1	103.0	98.1	98.3	100.9	100.7	102.5	102.7	102.7	100.7	99.1	97.7
53.7	54.5	55.7	56.2	56.7	58.4	59.4	60.8	62.4	63.5	64.5	65.8	67.1
90.7	89.4	89.0	97.7	95.7	93.2	89.1	94.6	94.2	93.2	88.8	92.0	93.9
132.0	122.3	118.3	117.9	121.6	128.0	130.3	131.7	131.5	125.5	121.4	119.6	119.4
116.9	113.2	112.8	112.4	111.6	111.0	110.8	112.9	113.5	113.5	115.0	114.6	116.7
79.3	69.9	70.7	69.7	74.2	72.2	72.6	75.4	77.3	72.7	72.5	73.3	76.5
Va.												
43.4	31.9	33.5	32.4	38.6	32.4	36.9	41.3	40.7	36.1	33.1	37.6	46.0
90.2	81.8	77.6	74.6	73.2	78.0	79.1	80.4	80.8	80.8	78.6	76.8	75.4
93.4	91.7	88.1	82.5	77.2	74.7	73.0	70.1	67.0	66.2	64.2	63.2	59.4
91.6	93.5	87.7	97.8	106.5	114.8	102.1	100.3	96.9	101.0	94.4	97.1	99.1
106.1	95.0	88.4	86.7	89.1	96.3	101.0	104.4	103.8	105.0	100.1	97.9	102.1
109.3	102.6	100.8	100.6	99.6	99.8	102.2	105.2	104.4	103.8	103.0	103.0	103.4
79.2	71.3	69.5	68.1	69.9	69.5	71.1	73.4	72.4	70.9	68.4	69.4	72.1
phia, Pa.												
43.9	34.4	38.1	32.7	43.4	38.3	42.7	46.3	45.1	38.2	39.3	40.0	46.4
104.6	96.2	89.5	87.4	87.6	88.0	88.0	88.4	88.2	87.4	85.5	84.6	84.4
48.1	48.7	49.6	51.1	52.9	54.7	58.1	62.4	66.9	69.9	72.4	74.3	75.3
92.0	89.7	85.7	86.3	93.0	94.4	89.9	95.0	102.2	98.0	91.7	92.9	94.8
101.6	91.7	90.0	89.1	96.9	108.1	110.8	110.8	111.6	108.8	102.3	99.1	100.5
116.2	113.8	112.3	111.5	110.7	112.0	112.4	112.0	112.0	112.0	110.7	111.3	117.6
74.3	68.2	68.2	65.5	70.7	69.8	72.1	74.2	74.7	71.9	71.5	72.0	76.1
Me.												
54.8	39.2	39.9	44.5	49.1	48.1	45.3	51.7	52.3	45.9	44.1	50.4	52.4
88.1	81.0	76.7	74.8	74.8	76.2	77.3	77.8	76.7	76.5	75.4	74.7	75.0
26.6	27.0	24.8	26.3	30.7	31.1	27.3	27.4	31.7	31.6	27.4	27.5	28.8
94.0	93.8	96.1	96.7	94.7	94.9	94.9	94.9	100.0	100.0	96.2	97.8	99.6
123.6	110.6	108.1	106.4	114.2	122.6	129.7	130.4	130.2	127.4	126.7	126.2	126.0
91.2	89.5	88.2	88.0	88.0	88.0	88.0	87.6	89.3	88.7	87.9	87.0	87.2
69.2	60.7	59.7	61.5	64.1	64.4	63.3	65.8	66.9	64.1	62.4	64.8	66.0
Ore.												
33.1	24.6	26.5	30.1	34.3	26.5	29.5	34.1	35.1	28.6	28.5	34.8	36.1
65.3	55.5	53.2	53.4	54.9	60.3	61.3	61.8	61.8	62.1	61.1	58.7	59.2
43.3	43.2	43.3	43.7	43.6	43.5	42.5	42.6	42.7	43.4	43.3	42.9	42.9
59.4	56.2	50.3	59.0	65.7	70.2	61.3	62.1	67.1	65.3	55.5	57.2	62.4
121.9	104.6	101.9	100.3	102.9	109.4	109.8	109.6	109.0	106.3	102.2	101.4	102.2
80.0	78.9	78.5	80.5	79.4	78.1	75.8	76.3	79.6	78.7	73.0	72.5	74.4
58.3	52.3	52.1	54.2	56.1	54.6	54.6	56.4	57.8	55.3	52.8	54.5	55.8

APPENDIX A—1: CHANGES IN THE COST OF LIVING IN EACH OF —(*Con*

(United States Bureau

Item of Expenditure	*San Francisco and*									
	Per Cent of Increase									
	Dec., 1915	Dec., 1916	Dec., 1917	Dec., 1918	June, 1919	Dec., 1919	June, 1920	Dec., 1920	May, 1921	Sept., 1921
Food	4.3[a]	9.6	35.9	66.2	63.3	74.2	93.9	64.9	33.3	40.6
Clothing	2.5	14.5	43.6	109.0	134.6	170.4	191.0	175.9	140.9	110.1
Housing	0.7[a]	2.5[a]	4.0[a]	3.9[a]	3.5[a]	4.7	9.4	15.0	21.7	23.6
Fuel and light	0.1[a]	4.6	14.4	30.1	28.9	41.3	47.2	66.3	63.3	65.3
House-furnishing goods	6.0	21.7	48.2	103.4	116.6	143.8	180.1	175.6	143.9	121.7
Miscellaneous	1.7[a]	8.3	28.6	50.5	61.0	74.7	79.6	84.8	84.4	87.4
All items	1.7[a]	8.3	28.6	57.8	65.6	87.8	96.0	85.1	66.7	64.6
	Savannah,									
Food	0.3[a]	17.6	50.8	76.2	74.2	80.9	91.7	63.5	28.7	36.8
Clothing	0.8	24.1	56.6	133.6	146.3	195.9	212.1	171.5	133.2	101.3
Housing	1.4[a]	3.0[a]	4.3[a]	5.9	10.2	22.0	33.5	58.6	61.9	60.6
Fuel and light	1.3[a]	1.7[a]	21.1[a]	37.5	35.5	52.2	65.3	94.4	74.2	66.4
House-furnishing goods	1.8	12.8	50.7	128.6	136.5	182.1	207.2	206.6	175.9	150.2
Miscellaneous	0.2[a]	14.5	42.5	67.3	71.2	82.0	83.8	91.5	93.0	88.0
All items	0.2[a]	14.6	42.5	75.0	79.8	98.7	109.4	98.7	77.6	71.3
	Seattle,									
Food	2.8[a]	8.5	38.7	72.5	69.3	80.9	102.3	54.1	27.1	34.9
Clothing	1.2	11.3	36.4	88.0	110.2	154.5	173.9	160.5	128.7	93.5
Housing	2.4[a]	5.4[a]	0.6[a]	44.3	51.5	71.5	74.8	76.7	74.8	71.3
Fuel and light	0.2[a]	2.9	23.9	51.8	51.8	63.8	65.8	78.7	78.7	77.3
House-furnishing goods	8.5	27.4	52.3	141.5	154.4	201.0	221.2	216.4	177.2	151.7
Miscellaneous	1.0[a]	7.4	31.1	58.5	71.4	86.8	90.4	95.5	105.5	105.5
All items	1.0[a]	7.4	31.1	69.9	76.9	97.7	110.5	94.1	80.2	75.5
	Washing									
Food	0.6	15.7	61.1	90.9	84.6[c]	93.3[d]	108.4	79.0	47.4	59.1
Clothing	3.7	23.2	60.1	112.6	109.5	165.9	184.0	151.1	115.9	89.8
Housing	1.5[a]	3.7[a]	3.4[a]	1.5[a]	1.4[c]	5.4	15.6	24.7	28.8	29.1
Fuel and light	[b]	7.3	24.9	40.9	41.8	42.8	53.7	68.0	57.1	57.6
House-furnishing goods	6.3	30.5	72.1	127.4	126.0	159.3	196.4	194.0	149.0	132.1
Miscellaneous	0.4	15.3	44.3	55.9	57.4	62.7	68.2	73.9	72.0	70.5
All items	1.0	14.6	47.3	73.8	71.2	87.6	101.3	87.8	67.1	66.2

[a] Decrease.
[b] No change.
[c] Figures in this column are for April, 1919.
[d] Figures in this column are for November, 1919.

Nineteen Cities, December, 1914 to December, 1924, Inclusive
tinued)

of Labor Statistics)

Oakland, Calif.

from December, 1914, to—

Dec., 1921	Mar., 1922	June, 1922	Sept., 1922	Dec., 1922	Mar., 1923	June, 1923	Sept., 1923	Dec., 1923	Mar., 1924	June, 1924	Sept., 1924	Dec., 1924
40.4	29.6	31.1	34.6	38.8	29.0	34.2	40.5	42.3	35.3	35.0	39.7	42.1
106.3	97.8	90.7	86.1	85.4	90.0	92.1	93.8	94.4	94.4	91.5	90.9	90.5
25.8	27.7	29.4	30.3	30.0	31.7	33.4	34.1	36.0	37.0	38.0	38.3	39.4
65.3	65.3	59.5	52.0	52.5	48.4	42.6	46.2	48.8	53.6	49.9	53.0	53.5
113.9	105.6	104.4	103.8	105.4	116.5	116.7	117.1	116.9	115.8	113.4	111.3	114.7
86.8	84.4	83.7	83.5	84.2	84.8	79.4	79.2	81.2	72.7	73.2	72.7	72.7
63.6	57.5	56.8	57.1	58.8	56.5	57.6	60.4	62.1	58.0	57.3	59.0	60.1

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33.7	16.7	22.7	19.8	27.6	24.0	22.6	24.3	25.0	19.4	17.5	20.8	25.1
84.2	74.1	71.7	77.4	76.2	81.7	81.2	82.4	80.9	81.1	79.1	77.8	75.8
60.9	58.8	57.8	56.5	52.7	51.5	49.5	48.2	47.5	46.5	45.3	44.3	41.0
66.1	65.3	55.2	60.6	68.3	67.8	61.9	62.2	64.1	63.6	59.7	59.2	62.2
133.7	126.0	120.1	121.6	123.8	133.6	135.9	135.0	133.4	132.2	130.6	129.2	128.7
87.4	84.6	81.1	80.9	79.5	78.8	77.5	77.2	76.7	77.9	77.5	77.5	77.5
66.2	56.9	56.8	57.2	59.2	59.2	57.9	58.3	58.2	56.3	54.8	55.4	56.3

Wash.

30.5	27.1	30.0	31.6	33.9	28.1	31.0	36.1	35.8	32.7	33.1	34.6	35.8
88.7	79.8	78.0	73.9	74.2	75.6	76.7	77.6	77.6	77.4	76.2	74.4	74.4
69.2	67.0	64.7	63.4	63.1	62.8	62.3	62.6	62.9	63.2	64.0	63.5	63.7
69.0	67.5	64.0	62.7	59.6	60.9	58.0	58.2	59.1	57.7	56.8	59.0	59.6
149.9	142.4	137.3	134.7	136.1	140.3	143.9	144.4	144.2	147.6	140.7	139.7	141.1
102.6	99.2	97.6	97.4	96.4	82.5	96.6	96.6	96.6	92.5	94.6	95.0	96.4
71.5	67.4	67.0	66.5	66.7	61.9	66.4	68.4	68.5	66.3	66.7	67.0	67.8

ton, D. C.

51.1	40.8	44.3	42.5	49.2	43.0	48.8	52.7	52.3	43.5	43.7	49.0	53.6
87.1	79.8	77.5	75.5	74.8	77.8	78.9	80.3	81.2	81.4	78.9	76.0	75.8
30.4	31.3	31.4	32.1	32.6	33.0	33.9	34.0	34.3	34.8	35.7	36.4	36.7
49.9	47.1	44.5	49.0	55.1	53.2	51.2	49.4	47.0	46.4	42.0	43.2	44.9
122.4	110.4	108.1	109.3	112.6	123.4	129.0	130.4	128.8	129.5	124.5	122.3	125.2
75.8	73.7	73.7	73.7	72.0	72.2	72.5	73.2	74.9	75.2	75.0	72.7	76.5
63.0	56.8	57.6	56.9	59.5	58.2	60.9	62.9	63.2	59.9	59.2	60.2	63.1

APPENDIX A—2: CHANGES IN THE COST OF LIVING IN EACH OF

(United States Bureau

Item of Expenditure									*Atlan*
	Per Cent of Increase								
	Dec., 1918	June, 1919	Dec., 1919	June, 1920	Dec., 1920	May, 1921	Sept., 1921	Dec., 1921	Mar., 1922
Food	19.0	18.0	27.9	34.0	12.8	8.9[a]	5.8[a]	7.2[a]	11.9[a]
Clothing	29.1	40.7	66.9	80.5	56.5	35.2	13.6	8.3	1.9
Housing	14.0	14.5	32.6	40.4	73.1	78.8	77.0	75.4	72.2
Fuel and light	17.0	17.9	30.8	61.0	66.8	56.1	46.6	43.7	34.8
House-furnishing goods	24.9	30.1	49.9	65.0	58.4	38.0	25.3	23.0	16.1
Miscellaneous	14.8	21.5	31.7	34.6	39.7	40.5	39.4	39.7	36.1
All items	19.7	23.3	37.9	46.7	38.5	25.2	20.7	18.7	13.8
									Birming
Food	17.7	18.3	26.5	36.4	11.9	9.1[a]	6.2[a]	8.5[a]	14.0[a]
Clothing	23.9	29.8	57.6	66.4	45.1	24.8	6.7	1.4[a]	5.2[a]
Housing	8.1	12.8	34.9	40.3	68.5	77.4	76.5	70.9	67.5
Fuel and light	22.8	31.9	39.8	55.3	74.2	54.3	53.1	44.1	29.8
House-furnishing goods	19.4	20.2	45.1	55.6	48.1	32.0	15.0	12.0	3.0
Miscellaneous	13.8	16.3	26.8	28.7	30.4	33.8	35.9	35.5	31.8
All items	17.0	19.8	34.3	41.9	33.3	22.1	19.6	16.2	11.0
									Cincin
Food	15.3	18.1	22.9	38.7	10.3	7.4[a]	2.2[a]	8.3[a]	12.4[a]
Clothing	33.8	48.3	84.2	96.7	73.5	49.0	22.6	13.9	6.7
Housing	.2	.8	12.8	13.6	25.0	27.6	28.2	28.5	30.3
Fuel and light	10.0	5.6	11.0	26.9	34.1	15.7	15.6	42.4	35.6
House-furnishing goods	25.7	30.5	51.1	75.5	66.7	39.7	25.2	22.3	16.7
Miscellaneous	20.4	21.8	40.3	47.6	53.4	52.3	48.2	47.3	44.4
All items	17.3	21.1	35.2	47.1	34.7	21.7	18.3	15.3	11.8
									Denver,
Food	20.0	20.7	26.0	41.5	7.9	13.1[a]	7.8[a]	8.8[a]	17.6[a]
Clothing	40.1	53.2	82.1	96.8	78.3	53.9	33.7	27.7	18.3
Housing	12.8	21.8	33.5	51.9	69.8	76.9	80.1	82.6	84.4
Fuel and light	8.1	8.4	19.6	22.3	47.1	37.5	40.0	39.7	33.1
House-furnishing goods	22.6	31.3	46.3	60.2	58.9	42.5	32.5	27.9	21.1
Miscellaneous	14.8	17.7	32.3	35.4	38.8	42.8	44.1	43.1	40.2
All items	20.7	25.3	38.2	50.3	38.7	26.9	26.1	24.5	18.5
									Indianap
Food	17.8	16.4	28.2	49.0	11.0	10.1[a]	2.1[a]	8.4[a]	13.4[a]
Clothing	32.4	40.1	73.8	87.9	72.3	45.8	21.5	16.2	10.9
Housing	1.6	2.6	11.6	18.9	32.9	37.4	41.4	43.8	42.2
Fuel and light	19.8	16.7	27.3	45.6	60.3	49.4	47.5	42.5	34.8
House-furnishing goods	18.9	24.8	48.4	67.5	63.0	35.3	25.0	22.5	13.9
Miscellaneous	21.9	26.8	38.2	40.5	47.5	47.4	46.5	46.2	45.8
All items	19.1	21.1	36.5	50.2	37.6	23.9	22.6	19.3	15.3

[a] Decrease

THIRTEEN CITIES, DECEMBER, 1917 TO DECEMBER, 1924, INCLUSIVE

of Labor Statistics)

ta, Ga.

from December, 1917, to—

June, 1922	Sept., 1922	Dec., 1922	Mar., 1923	June, 1923	Sept., 1923	Dec., 1923	Mar., 1924	June, 1924	Sept., 1924	Dec., 1924
10.5[a]	12.3[a]	8.9[a]	11.8[a]	10.3[a]	6.9[a]	6.3[a]	11.2[a]	10.2[a]	8.6[a]	5.5[a]
.4	3.1	2.8	5.4	5.9	6.7	6.9	6.9	5.7	5.0	4.9
68.1	63.2	62.7	61.9	61.4	62.5	62.2	60.9	60.1	57.7	56.9
39.1	58.7	57.6	56.5	42.7	42.4	39.3	38.2	32.0	31.9	33.1
15.2	13.9	17.4	21.6	23.9	23.7	23.5	22.0	20.4	20.0	20.4
34.5	34.2	34.1	34.1	32.8	33.6	33.3	33.8	33.8	33.7	33.7
13.7	13.9	15.1	14.6	14.2	15.9	16.0	13.8	13.6	13.7	14.9
ham, Ala.										
13.1[a]	14.5[a]	9.9[a]	12.5[a]	9.9[a]	8.3[a]	6.6[a]	11.1[a]	12.6[a]	8.3[a]	3.1[a]
6.1[a]	1.2[a]	1.7[a]	1.5	1.8	3.7	3.8	4.0	3.2	2.7	1.6
67.0	66.0	62.3	62.6	63.1	64.6	67.9	68.4	68.6	68.6	68.6
25.0	40.0	49.9	49.8	40.7	46.0	50.2	48.1	40.5	43.0	45.7
3.3	5.4	8.9	14.9	17.8	18.6	19.7	17.7	14.3	14.3	14.9
30.4	29.6	29.6	29.3	28.5	25.7	27.2	27.2	27.2	27.3	27.3
10.7	11.4	13.2	12.9	13.6	14.4	16.0	14.2	13.1	14.8	16.8
nati, Ohio										
8.9[a]	12.7[a]	10.4[a]	11.9[a]	9.3[a]	7.1[a]	6.7[a]	9.4[a]	10.2[a]	10.9[a]	8.3[a]
4.9	5.5	5.5	8.7	8.8	9.2	9.2	7.8	6.4	3.6	1.5
31.0	33.6	35.2	38.3	40.7	42.2	45.6	48.7	49.3	50.3	50.1
35.2	58.2	61.0	58.6	51.9	51.6	53.0	49.3	39.3	38.7	44.5
15.8	15.7	17.2	21.3	24.3	25.8	26.2	26.5	23.2	23.3	23.2
44.0	43.6	42.7	43.1	42.8	43.4	43.3	46.2	46.9	52.0	52.3
12.7	12.5	13.8	14.2	15.5	16.8	17.7	17.2	16.3	16.7	17.6
Colo.										
14.2[a]	17.2[a]	9.0[a]	14.6[a]	11.5[a]	10.4[a]	8.7[a]	13.9[a]	13.5[a]	13.5[a]	7.8[a]
15.3	15.9	16.6	16.9	16.9	17.5	17.9	17.2	16.1	15.3	15.1
84.8	85.0	86.9	87.1	85.4	86.7	88.9	87.6	84.4	84.2	84.0
32.8	41.4	40.7	38.0	30.4	37.6	37.2	16.3	19.7	23.9	25.4
20.4	20.0	21.2	24.7	26.1	26.7	27.0	26.2	23.8	24.2	24.2
38.1	37.7	37.6	37.9	37.1	37.5	36.8	36.5	35.1	35.6	35.6
18.8	18.1	21.6	19.7	19.9	21.2	22.1	18.5	17.8	18.1	20.2
olis, Ind.										
9.9[a]	13.2[a]	11.1[a]	10.3[a]	8.0[a]	4.2[a]	6.5[a]	9.8[a]	10.0[a]	6.7[a]	4.9[a]
7.9	8.3	8.6	11.5	11.6	13.1	13.4	12.8	11.9	10.8	10.4
41.3	41.7	44.1	44.5	44.6	45.9	47.1	37.2	46.5	46.8	46.7
44.9	71.3	73.4	69.1	54.9	54.3	41.5	42.6	38.2	36.7	41.5
13.7	14.2	16.7	21.5	23.2	23.6	24.0	24.4	21.4	21.4	21.5
45.4	46.0	46.7	47.1	46.1	49.9	49.2	48.5	51.5	53.5	53.3
16.4	17.1	18.8	19.7	19.4	22.2	20.6	19.3	19.3	20.7	21.4

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[a] Decrease.

APPENDIX A—2: Changes in the Cost of Living in Each of —(*Con*

(United States Bureau

Item of Expenditure									*Kansas*
	Per Cent of Increase								
	Dec., 1918	June, 1919	Dec., 1919	June, 1920	Dec., 1920	May, 1921	Sept., 1921	Dec., 1921	Mar., 1922
Food	17.3	15.1	24.5	44.9	10.2	8.3[a]	4.3[a]	6.6[a]	15.7[a]
Clothing	40.7	44.7	89.9	104.5	76.3	52.3	27.9	24.1	17.4
Housing	5.4	6.7	26.0	29.4	63.9	65.0	66.2	69.7	64.8
Fuel and light	18.0	9.6	27.5	35.2	55.1	43.3	43.7	42.6	36.0
House-furnishing goods	31.1	37.9	61.8	73.0	68.7	50.0	32.8	26.2	15.2
Miscellaneous	15.6	20.8	31.5	37.1	40.3	40.4	38.2	37.6	33.1
All items	19.6	20.6	38.2	51.0	39.5	27.3	23.9	22.5	15.3
									Memphis,
Food	20.3	22.7	28.4	38.8	7.0	14.2[a]	9.2[a]	11.2[a]	16.1[a]
Clothing	27.7	38.3	66.2	77.5	59.0	36.1	20.2	15.3	9.3
Housing	[b]	8.2	23.1	35.9	66.2	79.7	77.7	77.3	75.5
Fuel and light	26.8	23.4	34.1	49.7	105.4	64.5	66.1	67.1	61.8
House-furnishing goods	25.4	30.7	53.2	67.1	53.9	29.9	19.2	14.7	8.9
Miscellaneous	16.1	20.9	28.3	38.8	43.2	42.9	42.2	42.3	39.9
All items	18.3	23.3	35.2	46.4	39.3	26.7	25.1	23.2	19.2
									Minneap
Food	17.7	21.4	34.1	50.0	13.0	7.9[a]	3.5[a]	4.9[a]	10.0[a]
Clothing	33.5	40.1	67.0	76.7	63.6	41.0	18.4	14.3	9.7
Housing	0.1[a]	2.0[a]	8.0	10.7	36.8	39.0	44.0	46.7	46.7
Fuel and light	14.7	13.4	22.4	36.9	60.3	52.8	50.5	50.2	43.7
House-furnishing goods	18.1	23.6	45.6	65.5	65.8	43.3	30.5	27.9	21.9
Miscellaneous	12.3	15.9	25.4	31.3	37.0	37.9	37.3	37.4	34.5
All items	15.8	18.8	32.7	43.4	35.7	23.7	21.6	20.7	17.0
									New Or
Food	16.6	17.4	21.1	28.6	10.7	10.7[a]	6.4[a]	9.3[a]	12.0[a]
Clothing	36.8	48.8	83.2	94.9	69.4	45.0	29.2	24.9	18.9
Housing	[b]	0.1	10.8	12.9	39.7	46.7	49.5	57.9	58.2
Fuel and light	19.7	20.8	24.7	36.3	41.5	29.2	36.2	40.4	31.8
House-furnishing goods	23.8	30.0	57.7	75.9	63.9	47.7	30.7	28.5	20.8
Miscellaneous	15.9	17.5	35.1	42.8	57.1	58.2	61.0	60.2	59.1
All items	17.9	20.7	33.9	41.9	36.7	23.8	23.8	22.7	19.9
									Pitts
Food	18.8	16.2	25.1	36.5	14.3	8.8[a]	3.0[a]	5.6[a]	14.4[a]
Clothing	35.9	45.3	82.8	91.3	75.4	50.7	27.2	23.6	19 3
Housing	7.6	13.5	15.5	34.9	35.0	55.5	55.5	55.3	55.3
Fuel and light	9.2	9.4	9.8	31.7	64.4	59.8	55.6	66.2	66.0
House-furnishing goods	26.3	34.1	63.1	77.4	78.1	58.2	36.2	31.6	23.7
Miscellaneous	16.3	16.7	28.3	41.2	46.3	48.6	47.6	48.0	44.4
All items	19.8	21.8	36.2	49.1	39.3	27.7	24.4	22.8	17.4

[a] Decrease.

[b] No change.

THIRTEEN CITIES, DECEMBER, 1917 TO DECEMBER, 1924, INCLUSIVE

tinued)

of Labor Statistics)

City, Mo.

from December, 1917, to—

June, 1922	Sept., 1922	Dec., 1922	Mar., 1923	June, 1923	Sept., 1923	Dec., 1923	Mar., 1924	June, 1924	Sept., 1924	Dec., 1924
13.5[a]	16.1[a]	12.0[a]	12.9[a]	12.5[a]	12.1[a]	10.2[a]	12.2[a]	12.7[a]	11.3[a]	7.7[a]
15.9	14.7	14.6	14.5	14.5	15.3	15.2	14.3	13.3	12.1	12.0
59.4	57.8	61.4	61.1	53.7	53.9	56.8	55.1	49.5	47.7	46.2
36.3	47.1	40.2	38.6	36.1	35.1	36.7	35.9	34.5	34.8	32.9
11.6	10.3	12.1	21.2	22.5	23.0	22.6	21.5	16.8	16.1	16.1
32.3	32.4	33.3	33.4	33.8	34.6	36.2	35.4	35.3	34.6	34.3
15.0	14.2	16.2	16.0	15.3	15.5	17.2	15.8	14.3	14.2	15.3
Tenn.										
15.1[a]	17.7[a]	14.9[a]	15.3[a]	13.9[a]	11.7[a]	11.2[a]	14.1[a]	17.1[a]	14.0[a]	9.2[a]
7.3	7.0	6.7	9.5	9.8	10.9	11.0	10.0	9.5	8.0	6.4
74.8	73.9	72.5	72.3	72.3	72.0	72.5	72.2	72.4	70.5	68.6
56.3	70.4	69.2	70.5	62.8	62.1	65.0	66.2	55.1	66.2	66.2
6.8	7.8	12.2	20.3	23.2	22.1	23.4	22.3	18.6	18.4	20.1
37.8	37.8	37.4	38.2	38.1	37.3	37.3	36.6	36.3	37.5	37.4
18.2	17.9	18.6	19.6	19.9	20.6	21.0	19.5	17.6	19.1	20.4
olis, Minn.										
6.0[a]	9.9[a]	5.3[a]	7.6[a]	6.4[a]	5.0[a]	4.7[a]	6.7[a]	7.9[a]	7.8[a]	4.3[a]
7.9	6.0	6.5	8.7	9.2	9.4	9.3	9.4	7.4	7.0	5.6
44.6	46.2	46.8	46.8	42.5	43.4	47.4	47.4	44.7	43.3	44.9
43.7	44.8	47.0	48.0	44.9	43.0	45.6	44.4	42.2	42.5	43.2
31.4	21.3	22.5	26.7	29.7	27.8	28.2	26.5	22.8	22.4	23.3
32.6	32.5	32.6	32.5	32.8	32.3	32.0	31.7	31.3	31.2	31.2
17.3	15.9	18.0	17.8	17.4	17.8	18.8	17.9	16.2	16.0	17.3
leans, La.										
12.8[a]	13.7[a]	10.5[a]	12.5[a]	13.2[a]	9.9[a]	8.7[a]	11.0[a]	14.6[a]	10.0[a]	5.7[a]
15.6	15.4	16.2	16.4	17.8	19.0	19.5	19.1	18.6	17.1	17.2
58.5	58.7	54.7	54.7	55.5	55.8	57.4	57.9	57.1	57.4	57.2
33.4	30.7	38.5	35.2	32.9	34.4	37.1	34.5	32.9	32.2	36.2
17.9	17.7	26.2	29.9	34.8	33.7	33.0	32.0	29.2	29.6	30.0
58.6	55.6	51.9	50.1	50.1	50.3	50.3	49.4	48.7	47.4	48.7
18.9	17.8	18.6	17.6	17.7	19.4	20.2	18.8	16.8	18.2	20.6
burgh, Pa.										
12.2[a]	11.7[a]	5.4[a]	8.1[a]	5.4[a]	4.2[a]	2.1[a]	7.9[a]	7.5[a]	6.7[a]	2.4[a]
17.3	14.0	13.1	13.9	14.8	15.9	14.9	14.0	13.7	12.9	11.2
56.7	56.7	56.7	56.9	60.4	60.7	60.7	61.0	71.8	71.6	72.1
66.0	73.0	72.8	73.1	68.4	69.1	76.9	76.2	74.8	93.0	92.2
20.1	22.0	25.1	27.0	29.4	29.4	29.0	30.8	29.0	28.0	29.8
43.4	42.8	42.8	44.1	44.1	45.7	43.1	45.7	45.3	46.5	46.6
17.8	17.6	20.1	19.6	21.3	22.3	22.9	20.8	22.4	23.3	24.9

[a] Decrease.

APPENDIX A—2: CHANGES IN THE COST OF LIVING IN EACH OF —(*Con*

(United States Bureau

Item of Expenditure									*Rich*
									Per Cent of Increase
	Dec., 1918	June, 1919	Dec., 1919	June, 1920	Dec., 1920	May, 1921	Sept., 1921	Dec., 1921	Mar., 1922
Food	20.5	20.6	23.1	36.1	11.9	7.4[a]	1.0[a]	2.9[a]	10.2[a]
Clothing	33.8	42.3	78.6	93.6	69.0	43.8	24.2	21.2	15.9
Housing	1.0	3.6	9.8	12.5	25.9	29.4	33.0	34.1	34.2
Fuel and light	11.8	11.4	18.7	36.1	62.2	47.1	46.7	46.8	36.7
House-furnishing goods	26.3	28.6	55.9	75.4	70.0	48.8	36.0	33.0	28.1
Miscellaneous	9.0	13.5	24.0	32.4	36.0	38.7	38.4	38.4	35.5
All items	17.9	20.6	32.0	43.8	33.3	20.2	19.5	18.3	12.9

									St. Louis,
Food	18.0	16.1	26.2	46.2	8.8	10.1[a]	4.5[a]	11.6[a]	14.0[a]
Clothing	32.4	39.3	78.1	89.7	70.0	43.8	21.2	17.2	9.1
Housing	2.7	3.8	16.8	29.8	42.4	52.5	61.2	63.8	64.1
Fuel and light	4.8	3.7	8.2	19.6	42.6	30.9	29.5	33.4	30.9
House-furnishing goods	21.8	32.5	52.9	73.1	70.2	43.5	25.1	19.2	14.3
Miscellaneous	14.5	15.7	30.3	37.6	43.2	42.1	42.0	40.6	34.7
All items	16.7	17.9	34.2	48.9	35.4	23.1	22.0	18.5	14.7

									Scran
Food	21.3	18.1	26.9	41.4	17.8	4.0[a]	2.8	4.1	6.8[a]
Clothing	34.4	49.6	82.1	97.7	76.5	54.3	31.3	29.1	25.2
Housing	1.5	6.2	2.4	17.2	18.5	41.5	42.2	44.6	46.6
Fuel and light	24.7	25.7	31.5	43.5	67.3	62.8	64.8	67.1	65.8
House-furnishing goods	27.0	35.6	48.9	62.8	62.0	48.6	34.6	30.7	25.7
Miscellaneous	21.4	24.9	34.7	47.9	50.4	54.6	53.8	52.4	50.1
All items	21.9	25.0	37.1	51.5	39.1	28.2	26.3	26.3	20.4

[a] Decrease.

Thirteen Cities, December, 1917 to December, 1924, Inclusive

tinued)

of Labor Statistics)

mond, Va.

from December, 1917, to—

June, 1922	Sept., 1922	Dec., 1922	Mar., 1923	June, 1923	Sept., 1923	Dec., 1923	Mar., 1924	June, 1924	Sept., 1924	Dec., 1924
7.8[a]	10.8[a]	6.3[a]	9.0[a]	7.2[a]	5.1[a]	4.8[a]	8.9[a]	11.3[a]	7.6[a]	3.3[a]
12.9	10.6	10.6	11.8	12.5	13.4	12.9	12.7	11.9	10.9	8.9
34.5	35.4	35.3	35.7	35.7	39.1	39.4	39.5	39.5	41.0	41.3
33.4	44.5	54.2	59.9	52.7	54.7	61.2	60.7	49.1	49.2	47.9
27.6	27.5	29.4	34.7	40.0	40.4	40.5	40.8	37.8	38.6	38.5
34.7	34.6	33.5	33.9	33.9	34.7	35.4	35.8	35.8	34.8	35.7
13.2	12.1	14.4	14.3	14.9	16.6	17.1	15.5	13.5	15.0	16.5

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12.1[a]	13.8[a]	9.5[a]	12.7[a]	11.5[a]	8.6[a]	7.5[a]	10.6[a]	11.4[a]	9.8[a]	6.5[a]
7.9	6.2	6.3	9.0	9.0	9.5	9.6	9.5	8.6	8.1	7.9
65.7	67.0	68.0	70.2	74.6	77.4	79.5	80.9	83.4	83.6	83.4
32.3	44.3	48.9	47.5	30.8	31.7	32.1	31.3	21.6	21.6	24.6
12.8	12.3	14.9	27.5	29.8	31.0	30.5	30.6	26.2	26.1	27.4
33.2	33.1	33.4	33.5	33.4	35.8	35.8	35.8	35.7	35.7	35.8
15.1	15.0	17.0	17.3	17.7	19.9	20.6	19.4	18.8	19.3	20.7

ton, Pa.

6.7[a]	9.0[a]	2.1[a]	5.5[a]	5.1[a]	1.3[a]	0.2	6.7[a]	8.7[a]	5.4[a]	1.6[a]
24.2	21.1	20.7	21.5	21.7	23.3	23.2	23.1	22.2	21.6	21.1
52.8	53.1	53.6	53.6	59.0	59.5	60.8	61.0	67.6	68.1	68.6
68.0	69.3	68.6	65.2	65.2	65.4	75.3	73.9	68.9	74.0	75.7
24.2	25.4	28.5	31.8	34.7	34.4	34.9	35.4	31.6	33.0	34.6
49.9	49.3	49.3	51.4	51.4	51.4	51.7	52.8	53.7	53.9	53.7
20.9	19.4	22.4	21.6	22.4	24.4	25.8	22.9	22.4	24.1	25.8

[a] Decrease.

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